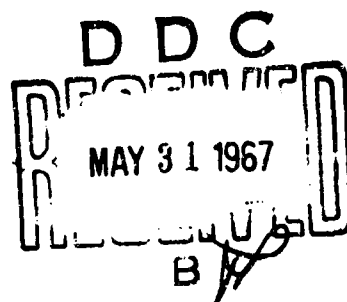
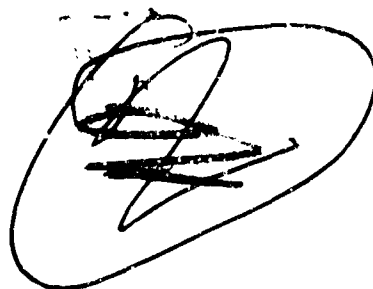


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**A SURVEY
OF ENVIRONMENTAL AND ECOLOGICAL DATA
ON SIX COUNTY AREA ADJACENT TO
CAPE CANAVERAL, FLORIDA**

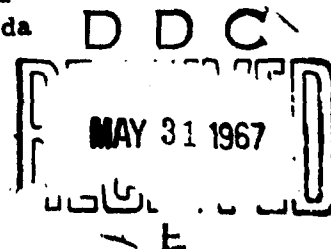
**Major Walter E. Brewer, USAF, VC
Technical Memorandum MTX-TM-63-2**

May 1963

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Air Force Missile Test Center
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Publication of this technical memorandum does not constitute Air Force approval of the memorandum's findings or conclusions. It is published only for the exchange and stimulation of ideas.

A SURVEY
OF ENVIRONMENTAL AND ECOLOGICAL DATA
IN THE SIX COUNTY AREA ADJACENT TO
CAPE CANAVERAL, FLORIDA

by

Walter Edward Brewer
Doctor of Veterinary Medicine
Auburn University

Bachelor of Arts (Sociology)
Tulane University

Masters in Public Health
School of Medicine
Tulane University

Thomas Nance Daniel
Bachelor of Arts (Biology)
Virginia Military Institute

David John Schindlbeck
Bachelor of Science in Education
Illinois State University

No objection to public release of this material

DATE 26 May 66 INITIAL DSB

OFFICE OF INFORMATION
AIR FORCE EASTERN TEST RANGE
PATRICK AIR FORCE BASE, FLA.

PREFACE

The primary purpose of this survey was to summarize environmental and ecological information on the six East Central Florida Counties adjacent to Cape Canaveral. The collection of current data in those areas of public health interest was the preliminary step prior to finalizing a detailed plan for an off-site Ecology Survey. The purpose of the proposed Ecology Survey will be to determine the normal physical, chemical, and radiological components of the soils, plant life (citrus, vegetable crops and pasture grasses), livestock and dairy products, wildlife and marine life (shrimp, oysters, fish, etc.) in the six counties adjacent to the Cape Canaveral Missile Test Annex. The material is presented mostly in the form of tables and maps and includes information on population, medical facilities, schools, clinics, agriculture, and wildlife in the counties of Brevard, Indian River, Orange, Osceola, Seminole, and Volusia.

It is hoped that the following presentation will be useful in summarizing present knowledge on the environment ("what we have now") in the six county area and that it may be of value as source material for future workers in the field.

ACKNOWLEDGMENTS

It has been necessary for the authors to contact various organizations and many individuals working in these areas of interest. These organizations and their staffs have been most courteous and helpful in providing information about their programs and assisting in evaluating the impact of Cape Canaveral in their field of endeavor. Every effort has been made to list all sources of information in the Bibliography and if there have been omissions, it was not intentional and it is hoped that no injustices have resulted. We are deeply indebted to the County Agricultural Agents, managers of the Agricultural Stabilization and Conservation Service, County Health Officers, Sanitarians, Chambers of Commerce, County Superintendents of Education, Wildlife Officers and to many others who have so cheerfully given of their time and effort in supplying the mass of information used in compiling this report and without whose assistance this report would not have been possible.

I wish to take this opportunity for special thanks to Betty Martin and Ann Mullins for typing the manuscript, checking the tables for accuracy, and in the scores of other details necessary in preparing final draft for the printers.

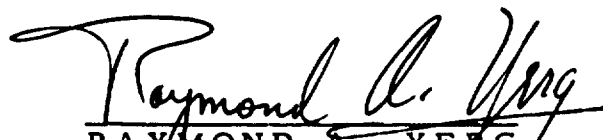
ABSTRACT

The six county area adjacent to Cape Canaveral is one of the fastest growing areas of the world with a population of more than 600,000 today and may possibly exceed one million before 1970. This memorandum contains environmental and ecological data on the six East Central Florida counties. The general areas investigated during the months of January and February 1963 include population statistics (past, estimated present and projected future), medical facilities at present and estimated future needs; schools (location, size, grades taught and number of teachers); climate, agricultural land use (citrus and vegetable crops; livestock; forestry) and wildlife statistics. There are 268 elementary and secondary schools with 134,520 students; and as most of the additional population will be a young working force, the number of students may exceed 300,000 in this decade. The number of general hospital beds, mental institutions and nursing homes available at the time of this survey and the projected needs for the immediate future have been listed in the form of tables. In the section devoted to agriculture, the general location of the 217,000 acres devoted to citrus, vegetable crops, sugar cane and forestry has been depicted on maps. More than 200,000 head of cattle graze on the 1,562,742 acres devoted to pasture land located mostly along the St. Johns and Kissimmee Rivers.

✓ The data contained in this memorandum is intended to provide background information for planning a detailed, statistically sound-continuing Ecology Sampling Survey of the six counties that will be affected most by future activities at Cape Canaveral. The off-site Ecology Sampling Survey should determine any variances in the chemical, physical, and/or radiological characteristics of the soils, plant life (citrus and vegetable crops - pasture grasses), water resources, wildlife

and marine life within ten, twenty, thirty, forty, and fifty-mile radii extending from the Cape Canaveral launch area. ↙

This technical memorandum has been reviewed and is approved.


RAYMOND A. YERG
Colonel, USAF, MC
Deputy for Bioastronautics

*Off-site = the non-federal land area of the six counties as contrasted with on-site = the federally owned land areas of USAF and NASA.

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SECTION I INTRODUCTION

INTRODUCTION

Today's Need for Planning

"There is a new America every morning when we wake up. It is upon us whether we like it or not. This new America is the sum of the many small changes--a new subdivision here, a new school there, a new industry where yesterday there had been vacant swamp land--changes that add up to a broad transformation of our lives. Our task is to guide these changes for, though change is inevitable, change for the better is a full time job."

. Adlai Stevenson

The above quotation is very descriptive of the Cape Canaveral area--the fastest growing section of our nation. It is essential that long range plans be initiated immediately by the six counties in the so-called "impact area" to develop a master plan of land use for the entire area. The master plan should be accomplished by appropriate specialists employed at federal, state, and local levels in consultation with and approved by local civilian and military groups so as to develop all resources adequately and in the best interest of all segments of the population. A way is needed to promote the orderly development of all land and water resources for their most important use in the Cape Canaveral area. The Indians who lived in this area a century or two ago pitched their camps by the side of a lake or river, and when they had contaminated the land they moved to new and cleaner ground. Modern man cannot be so casual. He must stay and work out his problems of sanitation, water and sewage disposal, toxic fuels and radioactivity, agricultural, fish and wild life contamination, housing, schools, roads, and other man-made problems.

It has often been pointed out that real planning begins only when something new is tried, when a departure is made from existing conditions and the old order of things, when plans and people are projected into the future. There have been few, if any, periods in history when any area of the world has had a more rapid rate of change in so small an area in as short a period of time as there has been and will be in East Central Florida between 1950 - 1975.

For the over-all good of the area and the nation, long range plans should be developed for location of industry, new residential area, recreational and wild life development and agriculture (livestock and citrus) so that all may function most efficiently in relation to each other and to their environment. As tourism is the state's most financially rewarding business recreational area (parks, picnic areas, beaches, etc.) and wild life areas for hunting and fishing must be protected, developed and planned so as not to be contaminated by industry and other activities.

When long range plans are completed, they should be readily available to every community organization and every citizen in the area. It should be readily accessible to all others who are interested in acquiring a residence or establishing a business in the area.

The so-called "six county impact area" extends approximately 120 miles north and south and 70 miles east and west. The eastern boundary of the three most easterly counties is the Atlantic Ocean. The center of the area is located approximately 23 miles ESE of Orlando, Florida (28.30° N - 81° W). The total land area of the six counties is 5220 square miles or 3,340,800 acres--an area larger than either of the states of Rhode Island, Connecticut, or Massachusetts and one-half the size of Belgium and more than ten times the size of Luxembourg.

The information contained in this report was obtained during the months of January and February 1963 by corresponding and visiting with local representatives in the six counties of Brevard, Indian River, Orange, Osceola, Seminole, and Volusia. The population statistics were obtained from the chambers of commerce, located in the major cities, and published data from federal, state, and private agencies. The agricultural land-use data were obtained from the U. S. Census Reports, State Department of Agriculture, and the local representatives of the various agricultural departments (County Agricultural Offices - Soil Conservation Service and Agricultural Stabilization and Conservation Service). It may be of interest to future collecting agencies that the County Agricultural Agent is the best source of accurate up-to-date information on all segments of agricultural land use. More detailed information was obtained by visiting a few of the larger farms located nearest the Cape. In general, the information obtained in the area of agriculture consists of the extent and general location of citrus crops, livestock, vegetable crops, and forestry in the six counties. The County Health Departments were very cooperative in providing us with information on the names, location, and size of food processing plants and dairy farms in the respective counties. The usual procedure was to leave a number of questionnaires with the Chief Sanitarian who was able to obtain up-to-date information via phone or by visiting the food processing plant and dairy farms in their respective counties. The information relating to number, location, and bed capacity of hospitals and

nursing homes presently in use and the number required to provide care for the rapidly expanding population was obtained from the County Health Officers and from the 1963 Fiscal Year Hospital Construction Plan for Florida. The data on the educational facilities were available from the State Department of Education, County Superintendent of Education and by corresponding with private, parochial and colleges located in the six county area. The Florida Fresh Water Fish and Game Commission was contacted to obtain the fish and wild life statistics.

The information contained in this report was the best available to the Project Officer as of January 1963.

SIX COUNTY "IMPACT" AREA

POPULATION

Florida is now the fastest growing state in the United States and passed Massachusetts during 1961 to become the 9th most populous state. In 1940, Florida ranked 27th in population and 20th in 1950. From 1950 to 1961, Florida's population growth rate was 85.1%, top for the nation. The absolute gain of 2,401,000 was exceeded by only one state, California.

The population of Florida was estimated to be 5,551,000 on 1 January 1963, two-thirds acquired within the past 20 years. Of the 2,180,000 people added to the state during the 1950's, over 240,000 settled in Orange and Brevard Counties. Brevard County's population increased by 371.1% in the last decade.

The present growth rate is estimated to be 240,000 annually. If present trends continue, Florida's population by 1968 is estimated to be 6,658,000 and by 1973 in excess of 8,000,000. It is estimated that the six county "impact" area will reach a population of one million by late 1969. Orange and Brevard Counties will be among those Florida counties growing the most in total numbers of people, and Indian River, Seminole, and Volusia will be among those making notable gains. Osceola is predicted to surpass the U.S. growth rate, but trail the Florida average.

Population density for Florida is now 98.6 people per square mile as compared to 52.4 for the U.S., and 127.1 for the "impact" area. The Florida population increased by about 500,000 during the first three years of the 1960's, with about 45,000 having settled in the "impact" area. The 10-year growth rate of the state continues at about 50% compared to a national 10-year growth rate of 20%. The 10-year growth rate of the "impact" area is about 70%.

SECTION II POPULATION

III-3

AREA POPULATIONS
of
BREVARD COUNTY

<u>AREAS</u>	1960 <u>(Official U. S. Census)</u>	1970 <u>Forecasts</u>
MERRITT ISLAND	9,508	25,000
NORTH BREVARD	18,735	45,000
CENTRAL BREVARD	23,395	50,000
SOUTH BREVARD	36,367	75,000
BEACH AREA From PAFB North	9,812	20,000
BEACH AREA From PAFB South	<u>13,618</u>	<u>35,000</u>
TOTAL	111,435	250,000

Source: NASA & Joint Impact Committee

INDIAN RIVER COUNTY

Indian River County is a sparsely populated area of 49 people per square mile. Of its 25,000 or more inhabitants, over a third live in or near Vero Beach. Indian River County is expected to be second to Brevard in growth rate during the 60's. Improvement of U.S. Highway A1A from Vero Beach to the portion of A1A adjoining Cocoa Beach could be an important factor in the growth of the county. Such a favorable access route to the missile sites would enhance the growth of major land and housing developments such as Sebastian Highlands, Vero Shores, and Vero Highlands. Aware of its vast potential, the county has accelerated its present programs in order to participate in the missile march.

POPULATION CENSUS - INDIAN RIVER COUNTY

<u>Area</u>	<u>1950</u>	<u>1960</u>	<u>Est.</u> <u>1 Jan 63</u>	<u>Est.</u> <u>1 Jan 68</u>	<u>Est.</u> <u>1 Jan 73</u>
County	11,872	25,309	29,300	39,000	52,000
Vero Beach	4,746	8,849		17,700	
Gifford	1,459	3,509			
Fellsmere	649	732			
Sebastian	376	698			
Indian River Shores		19			

ORANGE COUNTY

Orange County was the second fastest-growing county in the "impact" area during the 1950's, and is the most populous of the six counties. The county expects to remain as such during the foreseeable future with the highest concentration of people in the greater Orlando area. Orlando, situated in Central Florida, is a focal point or crossroads to all points of Florida. As a fast-growing city, opportunities are abundant for all types of industry, particularly those in support of the Space Program.

POPULATION CENSUS - ORANGE COUNTY

<u>Area</u>	<u>1950</u>	<u>1960</u>	<u>Est.</u> <u>1 Jan 63</u>	<u>Est.</u> <u>1 Jan 68</u>	<u>Est.</u> <u>1 Jan 73</u>
County	114,950	265,540	294,000	383,000	540,000
Orlando	32,367	88,135	103,000	135,000	
Winter Park	8,250	17,162			
Winter Garden	3,503	5,513			
Apopka	2,254	3,578			
Maitland	889	3,570			
Ocoee	1,370	2,628			
South Apopka		2,484			
Belle Isle		2,344			
Taft		1,214			
Eatonville		857			
Oakland	548	821			
Windermere	317	576			
Edgewood	217	436			
Bithlo	50	168			

OSCEOLA COUNTY

Osceola County has the lowest population in the six-county area and a density of only 14 people per square mile. Primarily an agricultural area, the potential growth of this county has yet to be unleashed. Increased space and missile testing activities will be main factors contributing to Osceola's population increase and industrial development. The growth rate, however, is expected to be only 26% by 1970. One factor could alter this and that is the construction of the Nova Road from Cape Canaveral to Kissimmee. Many future employees at the Cape and Nova areas may choose to live in Osceola if the Nova Road proves to be a suitable access route.

POPULATION CENSUS - OSCEOLA COUNTY

<u>Area</u>	<u>1950</u>	<u>1960</u>	<u>Est.</u> <u>1 Jan 63</u>	<u>Est.</u> <u>1 Jan 68</u>	<u>Est.</u> <u>1 Jan 73</u>
Osceola County	11,406	19,029	21,000	26,000	35,000
Kissimmee	4,310	6,845	7,200	8,500	

SEMINOLE COUNTY

Seminole County is the smallest county in area, but ranks second to Orange County in people per square mile at 171. Most of the population is concentrated in Sanford or along U.S. Highway 17-95 and Interstate #4. The adjoining Orlando Area and major U.S. Highways going through the county have been the main cause for the county's growth. It is expected that these factors, land and housing developments, plus affects of missile activities, will continue to contribute to the growth of the County which is expected to expand at a rate of 82% by 1970. With the steady development of Deltona, a proposed city along the northern shore of Lake Monroe, and an overflow from the Orlando area, Seminole County could easily attain its projected population of 100,000 by the early 70's.

POPULATION CENSUS - SEMINOLE COUNTY

<u>Area</u>	<u>1950</u>	<u>1960</u>	<u>Est.</u> <u>1 Jan 63</u>	<u>Est.</u> <u>1 Jan 68</u>	<u>Est.</u> <u>1 Jan 73</u>
County	26,883	54,947	64,000	82,000	107,000
Sanford	11,935	19,175	22,000	35,000	
Casselberry	407	2,463			
Oviedo	1,601	1,926			
Midway-Canaan	1,830	1,897			
Longwood	717	1,689			
Altamonte Springs	858	1,212			
North Orlando		609			

VOLUSIA COUNTY

Volusia County was one of the slowest growing counties in the "impact" area during the 1960's. However, the southern Volusia area has recently been considered a natural for location of space supporting industries and as a place of residence for persons employed at space facilities. The greatest effect of increased population will be along the coastal area south of Daytona Beach. With improved access routes into the Nova Project, southern Volusia may experience a more pronounced population increase than expected during this decade.

POPULATION CENSUS - VOLUSIA COUNTY

<u>Area</u>	<u>1950</u>	<u>1960</u>	<u>Est.</u> <u>1 Jan 63</u>	<u>Est.</u> <u>1 Jan 68</u>	<u>Est.</u> <u>1 Jan 73</u>
Volusia County	74,229	125,319	137,000	175,000	200,000
Daytona Beach	30,187	37,395			
DeLand	8,652	10,775		30,000	
New Smyrna Beach	5,775	8,781			
Ormond Beach	3,418	8,658		15,000	
Holly Hill	3,232	4,182			
South Peninsula		3,741			
North Peninsula		3,476			
Debary		2,362			
Edgewater	837	2,051			
South Daytona	692	1,954			
Port Orange	1,201	1,801			
Orange City	297	1,598			
Lake Helen	926	1,096			
Oak Hill	683	758			
Pierson	657	716			
Seville	427	623			

AREA POPULATION SUMMARY OF COUNTIES

1960

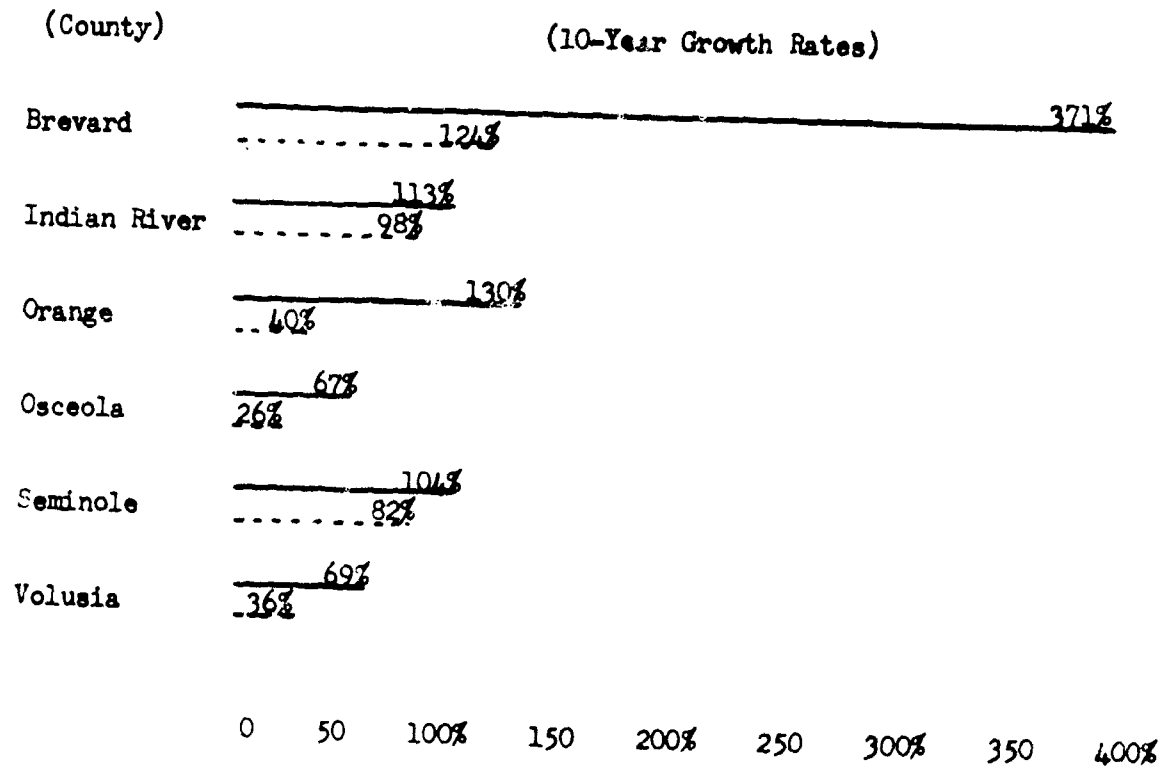
III-9

III-9

Population 1960									
Region	Land Area		U.S. Rank	Total	Per Sq. Mile	Increase % 1950-60	Under 5 Yrs.	Age %	
	State, County	Sq. Mile						21 Over	65 Over
*Florida		54,252	10	4,951,560	91.3	78.7	10.9	62.4	11.2
Brevard		1,031	275	111,435	108	371.1	14.2	58.3	5.7
Indian River		512	1,169	25,309	49	113.2	11.0	62.5	13.9
Orange		916	119	263,540	288	129.3	12.0	60.5	9.4
Osceola		1,325	1,509	19,029	14	66.8	9.0	67.4	22.8
Seminole		321	546	54,947	171	104.4	13.1	57.2	8.6
Volusia		1,115	246	125,319	112	68.8	8.6	68.5	19.7

*Source: County and City Data Book, 1962.

COMPARATIVE GROWTH RATES OF SIX COUNTIES



1950's _____
 1960's _____ (predicted)

SECTION III MEDICAL FACILITIES

GENERAL HOSPITALS

CRITERIA

The following criteria were used in determining "non-acceptability":

1. Facilities with less than 10 beds were declared unacceptable.
2. Facilities known to be non-fire resistive and of archaic construction.
3. Hospitals located in temporary facilities or housed in structures so designed as to make their operation undesirable.

As more detailed studies of each hospital service area are made, additional facilities will probably be declared non-acceptable.

DISTRIBUTION

The following factors were considered in the distribution of general hospital beds by regions and areas:

1. Applicable sections of the Federal Regulations - Part 53, pertaining to the Hospital Survey and Construction Act as amended.
2. Economic ability of the community to construct, maintain and operate a facility.
3. Reported admissions, patient days and per cent occupancy of existing facilities as compared with state average. (Bed need)
4. Accelerated civilian population growth, as reflected in the population estimates by Florida Development Commission Industrial Division.

The 1962 inventory of acceptable general hospital beds is 17,024 - a net gain of 995 over the 1961 inventory of 16,029 acceptable general hospital beds.*

GENERAL HOSPITAL PRIORITIES: Priorities are based on percentage of need met in each area. (The State is divided into seven Base Areas, 23 Intermediate Areas, and 27 Rural Areas. See attached tabulation.) Priority groupings are made on the basis of per cent of need met as follows:

<u>Priority</u>	<u>Percentage to Need Met</u>			
A	From	0	To	0.00
B		0.01		50.00
C		50.01		75.00
D		75.01		99.99
E		100.00		

*Number of beds as reported in Form PHS-5 is established as follows:

1. For Hill-Burton Hospitals the number of beds reflects the design capacity of the hospitals.
2. For other General Hospitals the number of beds is as reported annually by the hospitals modified by inspection by the state agency as needed.

DISTRIBUTION OF GENERAL HOSPITAL BEDS

Hospital Area	Population	Area Ratio	Existing Acceptable Beds	Area Occupancy	Add'l Beds Provided by Utilization	Projected Population Expansion	Add'l Bed Needs by Population Projection	Total Beds Planned	Add'l Beds Proposed for Construction	Grant Percentage	Per Cent of Need Met
Orange	274,434	960	1,094	82.1	329	13,203	46	1,335	241	35	81.94
Volusia-Flagler	134,028	469	473	91.0	201	6,448	22	692	219	45	68.35
Seminole	60,886	213	115	82.0	73	2,929	10	296	181	65	38.85
Brevard	119,180	417	342	106.8	214	5,734	20	651	309	45	52.53
Osceola	19,432	48	25	61.7	8	935	2	58	33	55	43.10
Indian River	26,008	91	100	64.5	15	1,251	4	110	10	40	90.90

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REGIONAL HOSPITALS* AND NURSING HOME BEDS Beds, Acceptable, Hospitals and Nursing Homes Orlando, Florida Area

Area	General Hospitals		Mental		Chronic		Nursing Homes	
	Existing	Additional Proposed	Existing	Additional Proposed	Existing	Additional Proposed	Existing	Additional Proposed
Orange	1,094	241	1,052	300	157	117	359	502
Volusia	473	219	0	0	0	0	400	59
Lake	178	66	0	0	0	0	101	67
Citrus	25	7	0	0	0	0	0	30
Sumter	0	30	0	0	0	0	25	2
Seminole	115	181	0	0	0	0	101	62
Brevard	342	309	0	0	0	0	48	216
Osceola	25	33	0	0	0	0	50	15
Total:	2,252	1,086	1,052	300	157	117	1,084	953

*There are no tuberculosis hospitals in East Central Florida.

THE FLORIDA HOSPITAL CONSTRUCTION FORMULA

Following is a brief explanation of the Florida formula for calculating hospital bed allowances by areas for participation in the Hill-Burton Act.

POPULATION

In Florida the population figure is furnished by the Florida Public Health Service. For the 1963 fiscal year, the total state population figure being used is 5,140,000. Further breakdown of this figure into population figures by individual counties is furnished by the Bureau of Economic and Business Research of the University of Florida. Grateful acknowledgement is made here to Dr. John Webb, Professor of Economics, for his invaluable assistance in this regard.

AREAS

Three classes of areas are distinguished:

- B-Area: An area which has, (1) a teaching hospital of a medical school, or (2) one general hospital with a capacity of 200 or more beds and which provides internships and residences in two or more specialties is designated as a B-area.
- I-Area: An area which has as a minimum, one general hospital which has a capacity of 100 or more beds is designated as an I-area.
- R-Area: An area which does not have at least one general hospital, or one proposed this fiscal year, with a capacity of 100 beds or more is designated as a R-area.

ALLOWANCE OF HOSPITAL BEDS

In accordance with sections 53.11, Public Health Service Regulations, Florida is allowed 4.5 beds per 1,000 population. $4.5 \times 5,140 M = 23,130$.

In accordance with section 53.11(b), Public Health Service Regulations, Florida is allowed an additional four beds beyond the total calculated above, as reflected in the initially approved State Plan of 1947.

23,130 by population

4 excess beds from initial State Plan

23,134 Total general hospital beds allowed for 1963
fiscal year State Plan

AREA BED DISTRIBUTION

Area bed distribution is based on the three factors listed below:

1. Existing area population.
2. One year projected population.
3. Utilization of existing facilities.

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INDEX OF TAXPAYING ABILITY

FOR THE YEAR 1962-63

Counties	Sales Tax Returns 1960-61 (Comptroller)	Gainfully Employed Workers 1960 (Ind. Comm.)	Farm Products 1959 (U.S. Census)	Valuation of R.R. & Tel. Property 1961 (Comptroller)	Auto Tag Sales 1961 (M.V.C.)	Index of Taxpaying Ability
	.3654	.2442	.0586	.0461	.2857	
Brevard	1.7626	3.1886	1.1474	2.1313	2.4584	2.2906
Indian River	.4493	.4311	1.5039	.5764	.5633	.5451
Orange	5.8103	6.3604	10.6259	1.8999	5.5619	5.9756
Osceola	.2263	.1434	1.1027	.3255	.4562	.3277
Seminole	.4371	.5880	1.5238	1.4610	.8703	.7086
Volusia	2.5600	2.3235	1.3092	2.9401	2.8095	2.5178

ACCEPTABLE AND NON-ACCEPTABLE GENERAL HOSPITALS

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Name of Facility	County	City or Town	Owner- ship or Control	Med- ical Type	Accept- able	Non- Accept- able	% Occu- pancy	Number of	
								Patient Days	Patients Admitted
Fla. Sanitarium and Hosp.	Orange	Orlando	Ch.	Gen.	153 ¹	67	123.3	68,890	8,195
Holiday Hosp. and Sanitarium	Orange	Orlando	NPA	Gen.	80		39.8	11,623	2,738
Orange e .	Orange	Orlando	NPA	Gen.	533 ²		91.9	128,477	18,245
Orlando Osteo.	Orange	Orlando	NPA	Gen.	50 ³				
Dr. Phillips Mem.	Orange	Orlando	Ch.	Gen.	53		46.4	8,986	1,628
W. Orange Mem.	Orange	Winter Garden	Co.	Gen.	86		67.4	21,182	3,035
W. Park Mem.	Orange	Winter Park	NPA	Gen.	139		63.2	32,081	4,886
Halifax Dist.	Volusia	Daytona Beach	Co.	Gen.	275 ⁴	45	108.7	76,236	9,473
Fish Memorial	Volusia	DeLand	NPA	Gen.	63 ⁵		90.8	17,911	2,553
W. Volusia Hosp.	Volusia	DeLand	Co.	Gen.	60 ⁶				
Holly Hill	Volusia	Holly Hill	Pvt.	Gen.		20			
Fish Memorial	Volusia	New Smyrna	NPA	Gen.	50		50.9	9,293	1,557
Ormond Beach	Volusia	Ormond Beach	NPA	Gen.	25		85.6	7,813	858

ACCEPTABLE AND NON-ACCEPTABLE GENERAL HOSPITALS (cont'd)

III-13

Name of Facility	County	City or Town	Owner- ship or Control	Med- ical Type	Accept- able	Non- Accept- able	% Occu- pancy	Patient Days	Number of Patients Admitted
Seminole Mem.	Seminole	Sanford	Co.	Gen.	115 ⁷		82.0	22,454	3,537
Cape Canaveral	Brevard	Cocoa Beach	Co.	Gen.	35 ⁸				
Brevard	Brevard	Melbourne	NPA	Gen.	160 ⁹	43	139.6	21,924	5,368
Wuesthoff Mem.	Brevard	Rockledge	NPA	Gen.	100 ¹⁰	23	110.0	18,079	4,181
Jess Parrish	Brevard	Titusville	NPA	Gen.	47		73.8	12,670	2,631
Kissimmee	Osceola	Kissimmee	Pvt.	Gen.		31	72.9	8,250	1,375
Osceola	Osceola	Kissimmee	Pvt.	Gen.		60	56.0	12,269	1,256
St. Cloud Hosp.	Osceola	St. Cloud	NPA	Gen.	25 ¹¹				
Indian River Mem.	Indian River	Vero Beach	Co.	Gen.	100		64.5	23,559	3,936

1. Statistics based on 153 acceptable beds.
2. Statistics based on 383 beds. 153 bed addition under construction.
3. New facility. Opened October 11, 1961.
4. Statistics based on 192 beds; acceptable beds. 83 bed addition under construction.
5. Statistics based on 54 beds. 9 bed addition under construction.
6. New 60 bed facility.
7. Statistics based on 75 beds, 40 bed addition.
8. New facility.
9. Statistics based on 43 unacceptable beds - 160 bed new facility.
10. Statistics based on 45 acceptable beds - 55 bed addition under construction.
11. New 25 bed hospital under construction.

GENERAL HOSPITALS SUMMARY

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Community in which existing suitable or proposed facilities are or will be located	Civilian population of area	Bed allowance based on area ratio	Existing suitable beds	Total beds planned	Number of beds planned per 1,000 population	Add'l beds proposed for construction	Per cent of needs met
ORANGE Orlando Winter Garden Winter Park	274,434	960	<u>1,094</u> 869 86 139	<u>1,335</u> 1,069 127 139	4.8	<u>241</u> 200 41 0	81.94
VOLUSIA-FLAGLER Daytona Beach DeLand New Smyrna Ormond Beach Bunnell	134,028	469	<u>473</u> 275 123 50 25 0	<u>692</u> 419 173 50 25 25	5.1	<u>219</u> 144 50 0 0 25	68.35
SEMINOLE Sanford	60,836	213	<u>115</u> 115	<u>296</u> 296	4.8	<u>181</u> 181	38.85
BREVARD Cocoa Beach Melbourne Rockledge Titusville	119,180	417	<u>342</u> 35 160 100 47	<u>651</u> 75 276 175 125	5.4	<u>309</u> 40 116 75 78	52.53
OSCEOLA Kissimmee St. Cloud	19,432	48	<u>25</u> 0 25	<u>58</u> 33 25	2.9	<u>33</u> 33 0	43.10
INDIAN RIVER Vero Beach	26,008	91	<u>100</u> 100	<u>110</u> 110	4.2	<u>10</u> 10	90.90

HOSPITAL CONSTRUCTION DEPARTMENT
FLORIDA DEVELOPMENT COMMISSION
CONSTRUCTION SUMMARY
A - CONSTRUCTION UNDER PUBLIC LAW NO. 725

III-15

Facility	Location	Owner- ship or Control	Medical Type	No. of Beds	No. of Bassinets	Status	Total Grant	Total Cost
West Orange Memorial Hospital	Winter Garden	NPA	General	33	8	Completed	125,528.96	211,979.02
Indian River Memorial Hospital	Vero Beach	NPA	General	30	9	Completed	164,592.52	500,323.36
Orange Memorial Hospital	Orlando	NPA	General	43*	0	Completed	276,006.58	786,724.20
Fish Memorial Hospital	DeLand	NPA	General	50	10	Completed	257,243.43	817,436.22
Seminole Memorial Hospital	Sanford	Co.	General	75	12	Completed	445,000.00	1,100,258.15
Melbourne Hospital Association	Melbourne	NPA	General	160		Under Construction	1,010,000.00	1,968,649.25
Cape Canaveral Hospital	Cocoa Beach	Co.	General	45		Completed	471,152.00	914,895.00
Seminole Memorial Hospital	Sanford	Co.	General	40*		Completed	325,000.00	676,051.32

CONSTRUCTION SUMMARY (cont'd)

III-15

Facility	Location	Owner- ship or Control	Medical Type	No. of Beds	No. of Bassinets	Status	Total Grant	Total Cost
Bert Fish Hospital	DeLand	NPA	General	9*		Under Con- struction	60,612.00	151,530.00
W. Volusia Hospital	DeLand	Co.	General	60		Under Con- struction	412,000.00	1,504,703.00
Halifax District Hospital	Daytona Beach	Co.	General	83*		Under Con- struction	571,000.00	2,318,500.00
Eugene Wuesthoff Memorial Hospital	Rockledge	NPA	General	55*		Under Con- struction	685,000.00	1,270,256.06
Orange County Regional Lab	Orlando	St.	District Laboratory			Completed	80,000.00	163,322.26
Seminole County Health Center	Sanford	Co.	H. C.			Completed	54,000.00	128,347.95
Morgan Memorial Rehab. Unit	Orlando	Ch.	Rehab.	60		Completed	188,727.31	436,489.00
Brevard Crippled Children's Clinic	Melbourne	NPA	Rehab.			Architect Drawing	75,000.00	150,000.00

*Addition and/or alteration to existing hospital.

NERVOUS AND MENTAL FACILITIES

NERVOUS AND MENTAL FACILITIES*

Data for the long-range plan for the development of institutions for the mentally ill in Florida were obtained in consultation with the Director of State Mental Hospitals, Florida State Board of Health, Directors of Mental Hygiene Clinics, and the Florida Hospital Association. The plan entails the following elements:

1. A dispersed system of State Hospitals on a Regional basis to provide for mentally ill patients, to be located adjacent to major population centers. Initial capacity for these institutions is programmed at 400 to 500 beds, with proposed future expansion to a maximum of 1,500 to 2,000 beds.
2. Psychiatric units of general hospitals having departmentalized services under an organized medical staff, to provide diagnostic, preventive, and short-term therapeutic and follow-up care.
3. Mental health and psychiatric clinics to provide preventive services on an out-patient basis.

STATE MENTAL INSTITUTIONS

The pattern for Florida's State mental hospitals is regional, adjacent to areas of concentrated population, so dispersed as to be within two and a half hour's driving distance from all patients' homes. State mental hospitals are multi-building units. Each new unit planned will consist of several buildings, or functional elements, designed for future expansion geared to needs of the regional area. New drugs, new techniques, and new concepts are changing patient-care patterns, reflected in new institutional design.

*1963 Fiscal Year Plan for Construction of Hospitals and Related Medical Facilities in Florida - Published by Florida Development Commission, Hospital Construction Division, Tallahassee, Florida.

Each unit will have a receiving section for screening and patient evaluation; an intensive therapy section; a chronic illness section; a section for long-term patients afflicted with advanced, non-responsive mental deterioration; a geriatrics and "industrial-type" section (for long-term ambulatory patients able to do gainful work); a day-treatment and out-patient section; and general-hospital and tuberculosis hospital sections. Occupational and some physical-therapy are provided in both existing hospitals and will be provided in new construction.

Admission to State mental hospitals is no longer necessarily equated with traditional long-term incarceration. Many patients are released to medically-supervised home care under the State hospitals' supplementary program, after 30- to 90-day in-hospital therapy. Private physicians and County Health Departments follow through at local level. About 1,000 State hospital patients are being supervised while on trial "furlough". It is anticipated that development of out-patient and "day care" programs in State (and other) institutions can markedly reduce both initial and "repeat" admissions.

Current State Mental Facilities for the treatment of children are limited to the Sunland Training Centers at Gainesville, Orlando and Fort Myers, admissions to State hospitals being limited to patients over 12 years of age. The 600-bed facility at Orlando is a former State Tuberculosis Hospital, which has been converted for this purpose and a 400-bed addition was completed during 1962. The new unit of the Sunland Training Center, located at Fort Myers, has been in operation since May, 1960, and has already been expanded by an addition to a total of 960 beds. A new 50-bed facility for the care of psychotic children was authorized by the 1959 Legislature but is not yet under construction.

PSYCHIATRIC UNITS OF GENERAL HOSPITALS

AND PRIVATE MENTAL INSTITUTIONS

It has been demonstrated that properly staffed psychiatric units in general hospitals can radically reduce commitments to State institutions. Patients not responding to short term, intensive therapy, or for whom the psychiatric unit is found inappropriate, are being referred to State hospitals for extended care from psychiatric units of general hospitals.

Only eight of Florida's general hospital regions, however, have any suitable psychiatric units. Two private facilities have a total of

135 acceptable beds; and one State facility has 50 acceptable beds for alcoholics.

It is proposed, at this time, to encourage development of psychiatric units only in one general hospital, on a Regional basis, where none now exists; and, where one does exist, to encourage expansion, if feasible. The critical shortage of psychiatrists and trained ancillary staff; the high cost of construction and operation of psychiatric units; and the potentials of higher quality care in concentrated effort, prompt this planning policy; but inclusion of one or more detention and treatment rooms for psychiatric patients in the bed complement of other general hospital construction, as distinguished from a 10- or more bed, departmentalized, psychiatric unit will be encouraged. Consideration also will be given to applicants for funds for establishing second psychiatric units in areas of large population and in areas of concentrated population widely dispersed.

DISTRIBUTION

The total additional mental beds allowed by Federal Formula, after deduction of beds planned for State hospitals, have been distributed by regions (following general-hospital regions), pro-rated by percentage of region-to-State population.

Federal funds of \$2, 300, 000 have assisted in financing construction of 471 of the 491 psychiatric beds (upon completion of construction underway) in general hospital units and 100 beds in a State mental hospital.

OUT-PATIENT SERVICES

Out-patient services are considered important adjuncts to in-patient facilities. Development of psychiatric clinics in the hospital's out-patient department would not only facilitate early detection and arrest of many behavioral and stress symptoms, but could reduce admissions, and, by providing follow-up services to ambulant patients, minimize in-hospital stay and costs to patients and maximize use of psychiatric beds. Some hospitals (both private and public) are providing therapeutic treatment to out-patients. Four general hospitals (each with psychiatric departments) have organized psychiatric clinics. State institutions are providing for out-patient services in new planning.

THE CURRENT PICTURE - BEDS AND SERVICES

Florida's four state hospitals (general type) for the mentally ill have a combined total of 10,496 beds. There are three hospitals for retarded children under twelve years of age with a combined total of 4,029 beds. The 6,149 bed total credited to the State Hospital at Chattahoochee is considerably overstated, as beds are reported by the Director to be crowded beyond normal capacity in some sections and some temporary beds have been set up. Several of the buildings comprising the Chattahoochee Hospital unit are converted Federal arsenal structures. A replacement and modernisation program is already being reflected in lower occupancy rates. Several of the hospital units are of recent construction.

Using the current bed figure shown, Florida's total beds for the care of her mentally ill is 15,309, which reflects 59.5 per cent of estimated need. The following table shows the ratios of acceptable beds in mental institutions by ownership and type:

	<u>Beds</u>	<u>Per Cent of Total</u>
1. State: Mental-General	14,568	95.16
2. City, County, State, N.P.A.: Psychiatric Gen'l Hosp. :	534*	3.49
3. N.P.A. Psychiatric Specialty Facility	22	.14
4. State: Alcoholic	50	.33
5. Private: Psychiatric and Alcoholic	135	.88
	<u>15,309</u>	<u>100.00</u>

The greatest deficiency in facilities and services for the mentally ill is that of general hospital psychiatric units. Most hospitals have one to several detention or "isolation" multipurpose beds but not medically organized psychiatric departments or facilities.

Last year, mentally ill patients spent over four and one half million days in Florida's mental institutions. Approximately 96 per cent of total days of patient care was provided by the state hospitals. Average length of patient stay in psychiatric units of general hospitals (data for 11 units) was 16.8 days; range 6.7 to 31.4 days. Based on data from the state institution for alcoholic patients, average length of stay was 10.9 days.

*18 beds under construction. 32

Providing adequate preventive and therapeutic care for Florida's mentally ill is a major problem calling for coordination of local and state resources and effort. Significant progress is being made at state level reaching into regional and local levels. Shortage of critical personnel is not the only barrier to the development and expansion of general hospital multi-county psychiatric units. A very serious obstacle to be overcome is the county line limitation on which all but State programs for the care of the indigent mentally ill are set up.

PRIORITY

First priority will be given to regional hospital over State hospital applications. Priority between general hospital regions will be based on per cent of bed need met, ability to staff adequately, and proposed screening and medical care programs. Priority ratings are assigned to mental regions on the same percentage basis as provided for general hospital areas.

CRITERIA

The following criteria were used in determining "non-acceptability":

1. Facilities known to be non-fire resistive.
2. Facilities located in structures so designed or located as to make their operation undesirable.

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NERVOUS AND MENTAL HOSPITAL FACILITIES AND HOSPITAL BEDS

Name of Facility	<u>Location</u>		Owner-ship or Control	Medical Type	<u>Bed Capacity</u>		Occu-pancy	Patient Days	Patients Admitted
	County	City or Town			Accept.	Non-Accept.			
Sunland Training Center	Orange	Orlando	St.	N&M	1,000 ^{2&3}		100.0	220,261	75
Fla. Sanitarium & Hospital	Orange	Orlando	NPA	Gen.	30		64.8	7,100	522
Holiday Sanitarium	Orange	Orlando	NPA	N&M	22		79.1	6,356	522
Halifax District Hospital	Volusia	Daytona Beach	Co.	Gen.		20	52.2	4,192	450

2. Patient data based on 600 beds, 400 bed addition recently completed.
3. 20% custodial.

NURSING HOMES

NURSING HOMES*

A nursing home is defined under the amended Hospital and Construction Act as a facility, "the purpose of which is to provide skilled nursing care and related medical services for a period of not less than 24 hours per day to individuals admitted because of illness, disease, or physical or mental infirmity. . ."

*1963 Fiscal Year Plan for Construction of Hospital and Related Medical Facilities in Florida--Published by Florida Development Commission, Hospital Construction Division, Tallahassee, Fla.

INVENTORY OF NURSING HOMES

Name of Facility	City or Town	Owner- ship or Control	Bed Capacity		Unsuit.	Percentage of Occupancy
			Suit.	Replace.		
Wekiwa Springs Nursing Home	Apopka	Ind.	30			22.81
Andrews Nursing Home	Orlando	Ind.	46			76.09
Boyer Nursing Home	Orlando	Ind.		20		
Clear Lake Manor	Orlando	Ind.		40		87.50
Hammond Nursing Home	Orlando	Ind.		93		
Johnson's Professional Nursing Home	Orlando	Ind.		30		100.00
Wright's Nursing Home	Orlando	Ind.		16		
DePugh Nursing Home Non-Cau.	Winter Park	Ind.	28			93.75
Endav-Win Sanitarium	Winter Park	Ind.	23			
Haven House Nursing Home	Winter Park	Ind.		15		91.30
Seals Nursing Home	Winter Park	Ind.		18		100.00
						88.89
Fair-Knoll, Inc.	Daytona Bch.	Ind.		19		89.47
Restorium, Inc.	Daytona Bch.	Ind.		30	5	85.71
Shore Manor Conv. Center	Daytona Bch.	Ind.	75			79.06
Allen's Nursing Home	DeLand	Ind.		35		85.71
Cutt's Nursing Home	DeLand	Ind.		20		
Latimer's Nursing Home	DeLand	Ind.		18		
Peaceful Haven Conv. Home	DeLand	Ind.		13		
Shady Rest Nursing Home	DeLand	Ind.	7	10		76.92
Volusia Nursing Home	DeLand	Ind.	133			
Riverview Rest Home	Holly Hill	Ind.		12		94.74
New Smyrna Nursing Home	N. Smyrna Bch.	Ind.		16		100.00
Orange City Nursing Home, Inc.	Orange City	Ind.			50	60.00
Bowman's Nursing Home	Ormond Bch.	Ind.			19	78.95
River Shore Nursing Home	Port Orange	Ind.		12		100.00

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INVENTORY OF NURSING HOMES (Cont'd)

Name of Facility	City or Town	Owner- ship or Control	Bed Capacity		Percentage of Occupancy
			Suit.	Replace. Unsuited.	
Marylander Nursing Home	Fern Park	Ind.	12		
Anderson Nursing Home	Sanford	Ind.	14		21.42
Sarepta Rest Home, Inc.	Sanford	Ind.	35		34.26
Seminole County Home	Sanford	Ind.	40		37.65
Eau Gallie Nursing Home	Eau Gallie	Ind.	10		100.00
Riverview Nursing Home	Eau Gallie	Ind.	17		86.47
Tropic Nursing Home	Merritt Island	Ind.	21		57.14
Brevard Nursing Home	Melbourne	Ind.		35	91.43
Pinedale Nursing & Conv. Home	Kissimmee	Ind.	20		100.00
Geriatrics Manor	St. Cloud	Ind.	12	14	100.00
Marcia's Nursing Home	St. Cloud	Ind.	18		44.44
Indian River Rest Home	Vero Beach	Ind.	30		
Mecca Convalescent Home	Vero Beach	Ind.	30		100.00

NURSING HOME SUMMARY

<u>Existing and Proposed Facilities Community</u>	<u>Existing Beds</u>	<u>Additional Beds Needed</u>	<u>Total Beds Needed</u>
<u>Orange</u>	<u>359</u>	<u>502</u>	<u>861</u>
Apopka	30	0	30
Orlando	245	402	647
Winter Park	84	100	184
<u>Volusia-Flagler</u>	<u>400</u>	<u>59</u>	<u>459</u>
Daytona Beach	124	59	183
DeLand	236	0	236
Holly Hill	12	0	12
New Smyrna Beach	16	0	16
Port Orange	12	0	12
<u>Seminole</u>	<u>101</u>	<u>62</u>	<u>163</u>
Fern Park	12	0	12
Sanford	89	62	151
<u>Brevard</u>	<u>48</u>	<u>216</u>	<u>264</u>
Eau Gallie	27	0	10
Merritt Island	21	0	38
Cocoa-Rockledge	0	75	75
Melbourne	0	75	75
Titusville	0	66	66
<u>Osceola</u>	<u>50</u>	<u>15</u>	<u>65</u>
Kissimmee	20	15	35
St. Cloud	30	0	30
<u>Indian River</u>	<u>60</u>	<u>11</u>	<u>71</u>
Vero Beach	60	11	71

RELATIVE NEED REPORT

Nursing Homes

<u>Counties Included</u>	<u>Percentage of Need Met</u>
Brevard	18.18
Orange	41.69
Seminole	61.96
Osceola	76.92
Indian River	84.50
Volusia-Flagler	87.14

PUBLIC HEALTH FACILITIES

PUBLIC HEALTH FACILITIES*

Since 1950, thirty-six public health construction projects (health centers, auxiliary health centers, and four district laboratories) have been completed under the Hill-Burton Program, with the assistance of approximately \$2,100,000.00 in Federal aid. Either under construction or in the current construction schedule are seven additional public health facilities involving about \$300,000.00 in Federal monies.

The following table graphically portrays Florida's existing acceptable public health facilities (including those under construction and planned for current construction) in relation to current need:

	<u>Existing Acceptable</u>	<u>Total Needed</u>	<u>Per Cent of Need Met</u>
District Laboratories	7	8	87.50
Health Centers	34	68	50.00
Auxiliary Health Centers	24	96	25.00

Public Health construction needs were determined by consultation with the State Health Officer and Staff.

PUBLIC HEALTH CENTERS & AUXILIARY HEALTH CENTERS

Most of Florida's health centers were originally set up in Courthouses and City Halls--usually in basements or on upper floors without benefit of elevators. Fifty per cent have been replaced with modern structures; but the remaining fifty per cent are inadequately housed. Twenty-five per cent of the auxiliary health unit needs (auxiliary to the main health centers) are currently available. Most

*1963 Fiscal Year Plan for Construction of Hospitals and Related Medical Facilities in Florida--Published by Florida Development Commission, Hospital Construction Division, Tallahassee, Florida.

auxiliary functions were set up in temporary quarters, a number of which are still in use.

Counties have been grouped together by the State Department of Health to form Public health "units", administered by public health physicians. A public health unit is an administrative entity, serving a geographic area consisting at the local level of one or more counties. Each such unit includes, or is programmed to include, a health center (the main administrative headquarters) and, with two exceptions, one or more auxiliary health centers.

Of the 34 health centers currently needed, the areas where need is most urgent are two--Orange and Duval Counties. There are no acceptable auxiliary health centers in Orange County (four programmed). Of Duval County's needed ten auxiliaries, only three acceptable facilities exist.

DISTRICT LABORATORIES

The Florida State Board of Health has established eight laboratory districts, with laboratories to be located in Pensacola, Tallahassee, Jacksonville, Orlando, Tampa, Lantana, Miami, and Winter Haven. The seventh district, resulted from expansion of functions of the S. E. Florida Tuberculosis Sanitarium Laboratory at Lantana to district use; although some laboratory services to this district will continue to be provided by the Miami laboratory. Tallahassee, Jacksonville, Miami, and Orlando laboratories are adequately housed. The Pensacola facility, although functionally obsolete and cramped for space, is structurally sound and is classified as acceptable. Both conversion and expansion are needed. Consideration is being given to expanding the functions of the Southwest Florida Tuberculosis Sanitarium Laboratory in Tampa, in lieu of new construction, to serve this district. The eighth district established the Regional Environmental Laboratory, Winter Haven, which has recently been completed.

DISTRICT OFFICES

Three special district public health services are provided directly to the populace of Florida within the jurisdiction of the respective district categories--narcotics control, sanitary engineering, and nutritional consultation.

In the State of Florida, control of narcotics is a public health service provided through the joint efforts of the druggist, hospital authorities, and law enforcement agencies of the various communities, in an endeavor to prevent and control the disease of narcotic addiction. The State Board of Health has for many years maintained statewide District Health Units through which narcotic control, sanitary engineering, and nutritional consultation services are provided as district services.

Currently, there are four narcotic control districts, five sanitary engineering districts, and four nutritional consultant districts. Ten counties provide sanitary engineering services at local levels, these counties being excluded from district functions.

The district offices for these special functions are housed either in public health facilities (which, with the exception of Jacksonville and Miami are unacceptable) or in temporary rented quarters. Each of these services is being provided in each district. District offices housed in temporary quarters are reflected as non-existing facilities. Provision of district offices for each of these public health services is proposed when new construction is undertaken in the respective district headquarters locations.

STATE LABORATORIES

A State Entomological Laboratory, at Vero Beach, for control of arthropods, mosquitoes, and other insects, began operation in 1955. Phosphate mines and citrus pulp industries--industrial processes producing massive waste products and incurring serious disposal problems--are concentrated in Polk County. State stream sanitation programs are currently being operated in west central and northwest Florida. Replacement of the unsuitable temporary structures used for this purpose is contemplated.

The sharp and sustained increase in Florida's population, the rapid expansion of her industrial and agricultural developments, increases the scope and magnitude of demands on her already complex burden of carrying on positive public health programs for which adequate facilities are imperative.

PROPOSED LOCATIONS

Locations designated for all new public health facilities have been programmed in consultation with the State Board of Health.

GRANT PERCENTAGE

The grant percentage for all health centers and auxiliary health centers will be shown on the table "Supplement to Criteria for Grant Percentages" - by county in which the health center or auxiliary health center is to be constructed (see criteria for grant percentages). District Laboratories will carry the State grant percentage (see Variable Grant).

PRIORITIES

The Health Center category has been assigned an "A" priority rating and, to date, all applications have been honored. However, should the situation arise where a choice need be made between applications, this will be determined by consultation with the State Board of Health and in consideration of the following factors:

1. The adequacy of existing facilities.
2. The need for new construction as opposed to conversion or expansion.
3. The size of the proposed facility.
4. Proposed program of services.
5. Ability to staff adequately.

III-20

PUBLIC HEALTH FACILITIES

Population of Political Subdivision	Name of Local Health Unit Serving Political Subdivision	Facilities				Description of Auxiliary Facilities
		Existing P.H.C.	Accept. Auxil.	Programmed P.H.C.	Auxil.	
119,180	Brevard Co. H. U.	0	0	1	2	Cocoa H.C., Melbourne, Titusville
274,434	Orange Co. H. U.	0	0	1	4	Orlando H.C., Apopka, Winter Garden, Winter Park, Maitland
45,440	Indian River - Osceola County H. U.	0	0	2	0	Vero Beach H.C., Kissimmee
60,886	Seminole County H. U.	1	0	0	0	Sanford H.C.
129,444	Volusia County H. U.	0	0	1	3	Daytona Beach H.C., DeLand New Smyrna Beach, Ormond Beach

SECTION IV EDUCATION

SCHOOLS

The increase in the school enrollment has been rapid as the age distribution of the population in Brevard, Seminole, and Orange is graphically skewed to the left. For example, fourteen and two-tenths per cent (14.2%) of the present population of Brevard County is less than five years of age; thus facilities, equipment, and the present teaching staff must be increased to teach 20,000 additional students during the next five years, less those that graduate or drop out, but not including the children of the additional families that will be moving into Brevard County during the same five-year period.

A list of the educational facilities by county and by city is included in the tables that follow. One can also find the grades taught in each school, number of instructors, and enrollment as of January 1963. This information was obtained from Florida Educational Directory, discussions with superintendents of education for each of the six counties and by corresponding with the registrars of the colleges and universities in the area. The public educational facilities total 223 with an enrollment of 143,595 and staffed by 5,923 teachers. The non-public educational facilities (private and parochial) total 45 staffed by 430 teachers and an enrollment of 10,925, thus an enrollment of 154,520 in the 268 elementary and secondary schools in the six county "impact" area. The eight colleges and universities have 400 full-time and 298 part-time faculty members for the 5,469 full-time and 5,080 part-time students. It has been estimated that by 1970, there will be 33,822 students from the six county area seeking a college education. This number will almost quadruple those students from the area who were enrolled in college in 1960. The total number of youngsters in the impact area competing for college enrollment in 1975 will possibly exceed 50,000. Thus, the need for a space age university in the area is quite evident.

To provide primary and secondary schools for the influx of children in the six county area when needed will require a continuing estimate not only of the total number moving into the area but a graphic representation of each residence to determine areas of greatest need. Accurate estimates must be provided school planners as far in advance of need as possible to compensate for the one to two year construction lag. It is of utmost importance that all local, state, and federal agencies co-operate with each other in fulfilling the educational needs of East Central Florida not only at the primary and secondary school level but must also provide adequate colleges, technical and graduate schools to provide the necessary talents for the space age.

PUBLIC
EDUCATIONAL FACILITIES IN
SIX COUNTY IMPACT AREA

(Elementary and Secondary Schools)

Name of School	Grade(s)	Teaching Staff	Student Enrollment
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BREVARD COUNTY
Cocoa, Florida

Cambridge Elementary	1-6	37	973
Clearlake Junior High	7-9	54	1,261
Cocoa Beach Elementary	1-6	45	1,253
Cocoa High	10-12	80	1,765
Edgewood Junior High	7-9	47	1,062
Merritt Island Elementary	1-6	30	727
Monroe High	7-12	29	581
Palmetto Elementary	1-6	7	204
Pinedo Elementary	1-6	35	886
Poinsett Elementary	1-6	34	852
Rockledge Elementary	1-6	38	955
Tropical Elementary	1-6	29	806

Melbourne, Florida

Airport Elementary	4-6	14	346
Eau Gallie Junior High	7-9	49	1,114
Harbor City Elementary	1-5	29	744
Indialantic Elementary	1-6	30	794
Meadowlane Elementary	1-6	24	607
Melbourne Elementary	1-6	48	1,148
Melbourne High	10-12	88	1,962
Sherwood Elementary	1-6	31	814
Southwest Junior High	7-9	58	1,358
Stone High	1-12	49	1,069
University Park Elementary	1-6	30	780
West Eau Gallie Elementary	1-6	5	149
W. J. Creel Elementary	1-6	29	749

III-21

Name of School	Grade(s)	Teaching Staff	Student Enrollment
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Satellite Beach, Florida

P.A.F.B. Elementary	1-6	25	584
Satellite Jr. & Senior High	7-12	68	1,604
Sea Park Elementary	1-6	39	1,003
Surfside Elementary	1-6	35	962

Titusville, Florida

Andrew J. Gibson	1-12	30	569
Bayview Elementary	1-3	20	475
Cuyler Elementary	1-6	8	230
Mims Elementary	1-6	24	540
Parkway Junior High	6-8	43	1,021
Riverside Elementary	1-5	29	736
Titusville High	10-12	58	1,170
Whispering Hills Elementary	1-5	29	736

<u>Totals</u>		1,357	32,066
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INDIAN RIVER COUNTY

Fellsmere, Florida

Fellsmere Elementary	1-8	2	48
Fellsmere School	9-12	9	208

Gifford, Florida

Gifford School		60	1,465
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Sebastian, Florida

Sebastian School		7	183
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Vero Beach, Florida

Beachland Elementary	1-8	7	202
Osceola Elementary	1-8	19	674

III-21

Name of School	Grade(s)	Teaching Staff	Student Enrollment
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Vero Beach, Florida (Cont'd)

Pleasant Ridge		2	28
Rosewood Elementary	1-8	28	720
Vero Beach Elementary	1-8	13	375
Vero Beach Jr. & Sr. High	10-12	73	1,754

Wabasso, Florida

Douglas Elementary	1-8	9	267
Wabasso School		6	117

Winter Beach, Florida

Winter Beach School		3	83
<u>Totals</u>		238	6,124

ORANGE COUNTY

Apopka, Florida

Apopka Elementary	1-6	29	724
Apopka Memorial Jr. & Sr. H.	7-12	59	1,228
Dream Lake Elementary	1-6	22	587
Lovell Elementary	1-6	11	300
Wheatley Elementary	1-12	52	1,220

Christmas, Florida

Christmas Elementary	1-6	2	51
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Gotha, Florida

Gotha Elementary	1-6	2	61
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Oakland, Florida

Oakland Elementary	1-6	6	216
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Name of School	Grade(s)	Teaching Staff	Student Enrollment
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Ocoee, Florida

Ocoee Elementary	1-6	24	640
Ocoee High School	7-12	32	636

Orlando-Winter Park, Florida

Audubon Park Elementary	1-6	32	912
Azalea Park Elementary	1-6	32	837
Blanknen Elementary	1-6	29	929
Boone High School	10-12	90	2,004
Brookshire Elementary	1-6	24	645
Catrina Elementary	1-6	20	475
Callahan Elementary	1-6	28	789
Cheney Elementary	1-6	18	456
Cherokee Junior High	7-9	51	1,102
Chicksaw Elementary	1-6	21	618
Colonial High School	7-12	115	2,626
Concord Park Elementary	1-6	14	329
Conway Elementary	1-6	30	739
Cypress Park Elementary	1-6	7	191
Delaney Elementary	1-6	17	386
Dover Shores Elementary	1-6	19	512
Durrance Elementary	1-6	29	782
Eccleston Elementary	1-6	35	928
Edgewater High School	10-12	91	2,024
Englewood Elementary	1-6	31	819
Evans High School	10-12	103	2,253
Fern Creek Elementary	1-6	33	874
Forrest Park Elementary		23	123
Gateway Elementary		9	121
Glenridge Junior High	7-9	60	1,392
Grand Avenue Elementary	1-6	22	574
Hannibal Elementary	1-6	9	245
Hiawasse Elementary	1-6		
Hill Elementary	1-6	6	146
Hillcrest Elementary	1-6	16	391
Holden Street Elementary	1-6	49	1,310
Howard Junior High	7-9	79	1,826
Hungerford	1-12	41	930
Jones Jr. & Sr. High	7-12	75	2,165
Kaley Elementary	1-6	20	509

Name of School	Grade(s)	Teaching Staff	Student Enrollment
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Orlando-Winter Park, Florida (Cont'd)

Killarney Elementary	1-6	31	877
Lake Como Elementary	1-6	30	793
Lakemount Elementary	1-6	32	873
Lake Silver Elementary	1-6	29	780
Lake Weston Elementary	1-6	29	852
Lancaster Elementary	1-6	20	578
Lee Junior High	7-9	60	1,396
Lockhart Elementary	1-6	19	506
Lockhart Junior High	7-9	22	399
Maitland Elem. & Jr. High	1-9	35	722
Marks Street Elementary	1-6	13	364
Memorial Junior High	7-9	40	828
Oak Ridge Junior High	7-12	83	1,864
Orange County Vocational	10-12	36	113
Orlo Vista Elementary	1-6	24	685
Parental Home	1-8	1	20
Park Avenue Elementary	1-6	13	314
Pershing Elementary	1-6	19	503
Pine Castle Elementary	1-6	32	806
Pine Hills Elementary	1-6	36	979
Pineloch Elementary	1-6	30	782
Princeton Elementary	1-6	21	464
Ray Elementary	1-6	25	666
Rock Lane Elementary	1-6	25	632
Rolling Hills Elementary	1-6	19	495
Tangelo Park Elementary	1-6	18	504
Washington Shores Elementary	1-6	39	1,075
Webster Avenue Elementary	1-6	14	316
Winter Park High School	10-12	54	1,233

Plymouth, Florida

Plymouth Elementary	1-6	4	128
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Tangerine, Florida

Tangerine Elementary	1-6	1	33
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Name of School	Grade(s)	Teaching Staff	Student Enrollment
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Union Park, Florida

Bonneville Elementary	1-6	8	210
Union Park Elementary	1-6	(31)	(831)
Union Park Junior High	7-9	()	()

Windermere, Florida

Windermere Elementary	1-6	7	214
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Winter Garden, Florida

Dillard St. Elementary	4-6	16	339
Drew	1-12	16	466
Lakeview High School	7-12	45	969
Tildenville Elementary	1-6	12	291
Winter Garden Elementary	1-6	14	366

Woodsmere, Florida

Spring Lake Elementary	1-6	14	317
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Zellwood, Florida

Douglass Elementary	1-6	4	115
Zellwood Elementary	1-6	9	211

<u>Totals</u>		2,567	61,534
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OSCEOLA COUNTY
Dearpark-Kenansville, Florida

Kenansville-Dearpark Elem.	1-8	5	86
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Name of School	Grade(s)	Teaching Staff	Student Enrollment
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Kissimmee, Florida

Kissimmee Elementary	1-8	28	1,216
Highland Elementary	1-8	19	608
Kissimmee Secondary	9-12	25	159
Osceola Junior & Senior High	7-12	48	924

St. Cloud, Florida

St. Cloud Elementary	1-6	20	481
St. Cloud Junior & Senior High	7-9	25	517

Totals

170 3,991

**SEMINOLE COUNTY
Alamonte Springs, Florida**

Alamonte Elementary	1-6	22	641
Rosenwald Elementary	1-8	13	364

Casselberry, Florida

South Seminole Elementary	1-6	22	669
South Seminole Junior High	7-9	39	1,045

Forest City, Florida

Bear Lake Elementary	1-6	23	732
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Geneva, Florida

Geneva Elementary	1-6	3	77
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Lake Mary, Florida

Lake Mary Elementary	1-6	20	612
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Name of School	Grade(s)	Teaching Staff	Student Enrollment
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Lake Monroe, Florida

Bookertown Elementary	1-6	3	76
Monroe-Wilson Elementary	1-6	10	240

Longwood, Florida

Longwood Elementary	1-6	21	638
Lyman High	10-12	27	591

Oviedo, Florida

Jackson Heights Elementary	1-8	14	405
Oviedo	1-12	25	591

Sanford, Florida

Crooms High	7-12	51	1,153
Goldsboro Elementary	1-6	30	971
Hopper Elementary	1-6	12	318
Midway Elementary	1-8	20	609
Pine Crest Elementary	1-6	34	980
Sanford Junior High	7-9	53	1,305
Seminole High	10-12	39	872
South Side Elementary	1-6	20	550
West Side Grammar	1-6	19	531

Totals

520 13,971

VOLUSIA COUNTY
Barberville, Florida

Barberville	2	31
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Name of School	Grade(s)	Teaching Staff	Student Enrollment
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Daytona Beach, Florida

Bonner Elementary	1-6	39	1,139
Campbell Elementary	1-6	13	360
Campbell Junior High	7-9	37	902
Campbell Senior High	10-12	26	417
Highlands Elementary	1-6	28	712
Hillcrest Spec. Ed. Ctr.		8	72
Lenox Avenue Elementary	1-6	11	248
Longstreet School		15	402
Mainland Junior High	7-9	49	1,226
Mainland Senior High	10-12	67	1,427
North Ridgeway School		16	379
Ortona School		11	290
Riverview		8	177
Seabreeze Junior High	7-9	33	875
Seabreeze Senior High	10-12	42	827
South Ridgewood School		16	379
T. T. Small Elementary	1-6	29	820
Volusia Avenue School		21	651

DeLand, Florida

Beston Avenue School	1-6	16	396
DeLand Junior High	7-9	52	1,150
DeLand Senior High	10-12	43	879
Dempsil-Breuster Elem.	1-6	23	548
Eucled Elementary	1-6	10	216
Eucled Junior & Senior High	7-12	26	558
G. W. Marks Elementary	1-6	28	719
Stark Elementary	1-6	18	471

DeLeon Springs, Florida

DeLeon Springs		6	158
Malloy Elementary	1-6	4	115

Enterprise, Florida

Enterprise School		9	242
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III-21

Name of School	Grade(s)	Teaching Staff	Student Enrollment
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Holly Hill, Florida

Central Junior High	7-9	27	582
Holly Hill Elementary	1-6	33	887
Hurst Elementary	1-6	32	1,000

Lake Helen, Florida

Lake Helen Elementary	1-8	2	56
Lake Helen High	9-12	4	114

New Smyrna Beach, Florida

Chisholm Jr. & Senior High	7-12	15	221
Coronado Beach Elementary	1-6	12	361
Faulkner St. Elementary	1-6	18	430
Kimbell Elementary	1-6	10	277
New Smyrna Beach Jr. & Sr. H.	7-12	49	1,169
Read-Pattello Elementary	1-6	25	517

Oak Hill, Florida

Oak Hill Elementary	1-6	2	47
Oak Hill School		8	186

Orange City, Florida

M. L. Coleman Elementary	1-6	3	103
Orange City School		8	212

Ormond Beach, Florida

Corbin Avenue Elementary	1-6	22	659
Ormond Beach Junior High	7-9	10	248
Osceola Elementary	1-6	24	675
Rigby Elementary	1-6	10	266

III-21

Name of School	Grade(s)	Teaching Staff	Student Enrollment
Osteen, Florida			
Osteen School		3	73
Pierson, Florida			
Pierson Elementary	1-8	8	140
Taylor High	9-12	13	225
Port Orange, Florida			
Port Orange School		19	453
Seville, Florida			
Seville		4	119
Seville Public		4	103
<u>Totals</u>		1,071	25,909

**NON-PUBLIC
EDUCATIONAL FACILITIES IN
SIX COUNTY IMPACT AREA**

(Elementary and Secondary Schools)

Name of School	Grade(s)	Teaching Staff	Student Enrollment
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**BREVARD COUNTY
Cocoa and Cocoa Beach, Florida**

Our Saviour's School	1-6	8	242
Royalton Private School	N-3	3	149
St. Marks Episcopal	K-6	7	120
Seventh Day Adventists	1-8	2	60

Eau Gallie, Florida

Ascension Catholic School		9	463
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Melbourne, Florida

Central Catholic High	9-10	8	40
Florida Air Academy	5-12	15	185
Holy Trinity Episcopal	1-6	7	170
Our Lady of Lourdes	1-8	10	525
Seventh Day Adventists	1-8	2	

Rockledge, Florida

St. Mary's School		10	326
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Titusville, Florida

St. Teresa's School	1-6	6	189
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Totals

87 2,409

III-22

Name of School	Grade(s)	Teaching Staff	Student Enrollment
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INDIAN RIVER COUNTY
Vero Beach, Florida

St. Helen	1-8	12	196
<u>Totals</u>		12	196

ORANGE COUNTY
Maitland, Florida

Seventh Day Adventists School	1-8	8	220
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Orlando, Florida

Ann Lisbeth Seese	K-12	9	63
Azalea Park Baptist	N-6	8	250
Baptist Temple School	K-1	2	37
Bishop Moore High	9-12	34	629
Cathedral School	K-9	16	200
Christ the King Episcopal Day	K-6	8	126
The Good Shepherd School	1-8	14	550
Morning Star School (Handi- capped Chld)		2	8
Open Air School	N-3	3	151
Ethel Ann Platts Private Day School	1-9	4	63
St. Andrew	1-6	8	282
St. Charles School	1-8	17	606
St. James School	1-8	20	690
St. John Vianney Catholic	K-4	6	50
St. Joseph School	1-8	8	297
Seventh Day Adventists Church School	1-8	9	270
Trinity Lutheran School	K-6	6	225

Winter Park, Florida

St. Margaret Mary School	1-8	16	500
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III-22

Name of School	Grade(s)	Teaching Staff	Student Enrollment
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Zellwood, Florida

Hampden DuBose Academy	9-12	17	218
<u>Totals</u>		215	5,315

SEMINOLE COUNTY
No. Maitland, Florida

Forest Lake Academy	9-12	20	329
St. Mary Magdalen Catholic School	1-4	4	160

Oviedo, Florida

St. Luke's Christian Day School	1-8	4	113
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Sanford, Florida

All Souls School	K-8	11	510
<u>Totals</u>		39	1,112

VOLUSIA COUNTY
Daytona Beach, Florida

Father Lopez High School	9-12	14	232
Our Lady of Lourdes School	1-8	9	499
St. Paul's School	1-8	8	402
Seabreeze Private School	1-12	12	120
Seventh Day Adventists	1-8	1	

DeLand, Florida

Florida Military School	7-12 (13-14)	22	325
St. Peter's Catholic School	1-8	6	220

III-22

<u>Name of School</u>	<u>Grade(s)</u>	<u>Teaching Staff</u>	<u>Student Enrollment</u>
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New Smyrna Beach, Florida

Sacred Heart School	1-5	5	95
<u>Totals</u>		77	1,893

INSTITUTIONS OF HIGHER LEARNING IN
SIX COUNTY IMPACT AREA

JANUARY 1963

Name of School	Grade(s)	Teaching Staff		Student Enrollment	
		Full time	Part time	Full time	Part time

BREVARD COUNTY
Cocoa, Florida

Brevard Junior College	13-14	56	76	607	1799
Carver Junior College	13-14	1	14	44	8

Melbourne, Florida

Brevard Engineering College	13-16	5	100	21	650
<u>Totals</u>		62	190	672	2457

ORANGE COUNTY
Orlando, Florida

Orlando Junior College	13-14	45	13	756	588
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Winter Park, Florida

Rollins College	13-16	100	45	890	1100
<u>Totals</u>		145	58	1646	1688

VOLUSIA COUNTY
Daytona Beach, Florida

Bethune-Cockman College	13-16	34	6	707	13
Daytona Bch. Junior College	13-14	54	10	758	512

III-23

Name of School	Grade(s)	Teaching Staff		Student Enrollment	
		Full time	Part time	Full time	Part time
DeLand, Florida					
Stetson University	13-16	105	29	1686	410
<u>Totals</u>		193	45	3151	935

**SUMMARY OF EDUCATIONAL FACILITIES IN
SIX COUNTY IMPACT AREA**

JANUARY 1963

<u>Brevard County</u>	<u>Number of Schools</u>	<u>Instructors</u>	<u>Student Enrollment</u>
Public Educational Facilities	38	1,357	32,066
Non-Public Educational Facilities	12	87	2,409
Elementary & Secondary Totals	50	1,444	34,475
Senior Colleges & University Totals	3	(F) 62 (P) 190	(F) 672 (P) 2457
<u>Indian River County</u>			
Public Educational Facilities	13	238	6,124
Non-Public Educational Facilities	1	12	196
Elementary & Secondary Totals	14	250	6,320
Senior Colleges & University Totals	0	0	0
Educational Institutions Totals	14	0	0
<u>Orange County</u>			
Public Educational Facilities	88	2,567	61,534
Non-Public Educational Facilities	20	215	5,315
Elementary & Secondary Totals	108	2,782	66,849
Senior Colleges & University Totals	2	(F) 145 (P) 58	(F) 1646 (P) 1688
Educational Institutions Totals	110	0	0
<u>Osceola County</u>			
Public Educational Facilities	7	170	3,991
Non-Public Educational Facilities	0	0	0
Elementary & Secondary Totals	7	170	3,991
Senior Colleges & University Totals	0	0	0
Educational Institutions Totals	7	0	0

<u>Seminole County</u>	<u>Number of Schools</u>	<u>Instructors</u>	<u>Student Enrollment</u>
Public Educational Facilities	22	520	13,971
Non-Public Educational Facilities	4	39	1,112
Elementary & Secondary Totals	26	559	15,083
Senior Colleges & University Totals	0	0	0
Educational Institutions Totals	26	559	15,083
 <u>Volusia County</u>			
Public Educational Facilities	55	1,071	25,909
Non-Public Educational Facilities	8	77	1,893
Elementary & Secondary Totals	63	1,148	27,802
Senior Colleges & Universities	3	(F) 193 (P) 45	(F) 3151 (P) 935
Educational Institutions Totals	66		

**SIX COUNTY IMPACT AREA
EDUCATIONAL FACILITIES TOTAL**

Public Educational Facilities	223	5,923	143,595
Non-Public Educational Facilities	45	430	10,925
Elementary & Secondary Totals	268	6,353	154,520
Senior Colleges & Universities Total	8	(F) 400 (P) 293	(F) 5469 (P) 5080

KEY:

(F) Denotes: Full-time students (12 semester hours or more)
Full-time faculty members

(P) Denotes: Part-time students (less than 12 semester hours)
Part-time faculty members

SECTION V CLIMATOLOGICAL DATA

SURFACE WINDS

Percentage Frequency of Occurrence Directions by Speed Groups

1286B Cape Canaveral Florida Missile Test Annex
1951 - 1962

III-25

Speed Dir	Total					Total No. of Observations		Sum of Speed	Mean Wind Speed Knots
	1-3 Knots	4-10 Knots	11-21 Knots	22-27 Knots	28-40 Knots	4 Knots and Over	%		
N	.7	3.5	2.7	.1	.0	6.3	7.0	49,810	9.5
NNE	.4	2.6	1.1	.0	.0	3.7	4.1	26,453	8.6
NE	.6	3.5	1.4	.0	.0	4.9	5.5	34,244	8.3
ENE	.5	3.4	1.5	.0	.0	4.8	5.3	34,338	8.6
E	.8	6.9	2.2	.0	.0	9.1	10.0	61,119	8.2
ESE	.6	5.5	1.6	.0	.0	7.1	7.7	46,210	8.0
SE	.8	6.1	2.2	.0	.0	8.3	9.1	55,919	8.3
SSE	.5	4.1	1.6	.0	.0	5.7	6.2	39,340	8.5
S	.8	5.2	1.5	.0	.0	6.7	7.5	43,507	7.8
SSW	.5	2.9	.6	.0	.0	3.6	4.1	22,227	7.2
SW	.8	2.8	.6	.0	.0	3.4	4.2	21,747	6.9
WSW	.6	1.8	.5	.0	.0	2.3	2.9	14,864	6.9
W	.9	3.7	1.2	.1	.0	5.0	5.9	33,885	7.7
WNW	.6	2.6	1.1	.0	.0	3.7	4.3	25,917	8.1
NW	.7	4.1	1.7	.1	.0	5.8	6.5	40,452	8.3
NNW	.5	2.4	1.4	.0	.0	3.8	4.3	28,527	8.9
Calm							5.3	3,943	
Total	10.3	61.0	22.8	.3	.0	84.4	100.0	578,559	7.8

III-26
TEMPERATURE AND PRECIPITATION INDEX

for

PATRICK AFB AND CAPE CANAVERAL MISSILE TEST ANNEX

Patrick AFB Temperature Index				Mean Monthly Precipitation in Inches	
March 45 - July 47		Feb 50 - Apr 58		Aug 50 - Feb 54	Apr 56 - Jul 62
Month	Mean	Mean Max.	Mean Min.	PAFB Monthly Aver.	CCMTA Monthly Aver.
Dec.	64.2	70.9	57.4	1.58	1.65
Jan.	63.2	70.1	56.2	2.05	2.68
Feb.	63.8	70.4	57.0	2.71	3.04
Winter Aver.	63.73	70.46	56.86	2.11	2.45
March	67.9	74.5	61.0	3.40	4.48
April	72.5	78.4	66.4	2.63	2.58
May	77.1	82.8	71.3	3.08	2.05
Spring Aver.	72.5	78.56	66.23	3.03	3.03
June	80.3	85.6	74.5	5.47	4.81
July	81.1	86.6	75.5	3.45	4.73
Aug.	82.2	87.8	76.5	4.19	4.83
Summer Aver.	81.20	86.66	75.50	4.37	4.79
Sept.	81.3	85.9	76.4	7.79	7.33
Oct.	76.4	80.9	71.8	7.91	6.20
Nov.	69.3	75.1	63.3	2.62	2.40
Fall Aver.	75.66	80.63	70.50	6.19	5.31
Aver. Temp.	73.27	81.32	67.27		
Total Precip.				48.88	46.78
A. Wettest Month: September				C. Hottest Month: August	
B. Dryest Month: December				D. Coldest Month: January	

AVERAGE TEMPERATURES 1957 - 1961

By Month

<u>Year</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>
1961	58.14	63.99	69.97	69.10	75.95	79.33
1960	60.68	60.63	61.55	72.04	74.84	77.84
1959	59.37	61.10	64.52	71.32	77.48	80.28
1958	54.30	53.38	64.39	71.20	75.41	81.59
1957	<u>64.88</u>	<u>67.83</u>	<u>65.84</u>	<u>72.83</u>	<u>81.58</u>	<u>80.25</u>
Aver./Mo.	59.47	61.39	65.25	71.40	77.11	79.86

<u>Year</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
1961	82.0	82.22	80.16	73.61	69.57	64.62
1960	81.83	81.39	79.46	76.04	69.36	57.68
1959	81.57	81.59	79.70	77.48	68.64	61.59
1958	82.31	82.18	81.22	72.91	71.52	62.67
1957	<u>81.88</u>	<u>81.01</u>	<u>80.74</u>	<u>72.29</u>	<u>70.15</u>	<u>59.83</u>
Aver./Mo.	81.92	81.68	80.26	74.47	69.85	61.28

AVERAGE OF SIX COUNTY CLIMATOLOGICAL DATA

Inclusive 1957 - 1961

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AVERAGE TOTAL PRECIPITATION 1957 - 1961

Year	Jan.	Feb.	Mar.	Apr.	May	June	July
1961	2.46	2.61	2.57	1.90	2.76	5.24	4.91
1960	.99	5.88	8.91	1.90	2.54	8.50	10.52
1959	6.94	2.98	8.48	4.15	4.28	9.67	5.65
1958	5.56	2.62	6.04	3.54	3.10	4.70	5.74
1957	2.06	3.41	3.91	4.10	6.94	5.09	9.01
Mo./Total	18.01	17.50	29.91	15.59	19.62	33.20	35.83
Average/Mo.	3.60	3.50	5.98	3.12	3.92	6.64	7.17
							Monthly
	Aug.	Sep.	Oct.	Nov.	Dec.	Annual Total	Average
1961	7.70	3.61	3.13	1.61	.78	38.52	3.21
1960	5.89	17.27	3.08	.70	1.04	67.22	5.60
1959	6.44	8.48	6.83	2.51	1.80	68.21	5.68
1958	4.48	3.32	6.97	2.29	3.00	51.36	6.42
1957	7.61	8.50	2.25	1.16	2.55	55.60	4.63
Mo./Total	32.12	41.18	22.26	8.27	9.17		
Average/Mo.	6.42	8.24	4.45	1.65	1.83		5.1

AVERAGE OF SIX COUNTY CLIMATOLOGICAL DATA
Inclusive 1957 - 1961

III-29
AVERAGE TEMPERATURE EXTREMES AND FREEZE DATA
1957 - 1961

Year	Highest Temp	Lowest Temp	High Mo.	Low Mo.
1961	98.60	26.38	8	12
1960	96.00	29.38	7	12
1959	95.88	28.88	8	1
1958	98.38	25.67	6	1
1957	96.38	23.78	7	1
Aver./High-Low	97.05	26.82		
1957 - 1961				
Volusia	96.67	23.63		
Seminole	97.25	26.88		
Brevard	97.40	25.60		
Orange	97.75	28.50		
Osceola	97.80	27.00		
Indian River	96.50	28.80		

Month based on number system: 1-12

AVERAGE OF SIX COUNTY CLIMATOLOGICAL DATA
Inclusive 1957 - 1961

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STATION INDEX

Based on 1961 Data

<u>Station/County</u>	<u>Lat.</u>	<u>Long.</u>	<u>Elevation in Feet Above Sea Level</u>
<u>BREVARD COUNTY</u>			
Titusville (2W)	28-37	80-50	40'
Melbourne (AP)	28-05	80-37	24'
<u>INDIAN RIVER COUNTY</u>			
Fellsmere	27-46	80-36	25'
Vero Beach (FAA-AP)	27-39	80-25	24'
<u>ORANGE COUNTY</u>			
Orlando (WB-AP)	28-33	81-20	106'
<u>OSCEOLA COUNTY</u>			
Kissimmee (2)	28-18	81-24	68'
<u>SEMINOLE COUNTY</u>			
Sanford Exp. Station	28-48	81-15	14'
<u>VOLUSIA COUNTY</u>			
Daytona Beach (WB-AP)	29-11	81-03	31'
DeLand (3N)	29-04	81-17	40'

AVERAGE OF SIX COUNTY CLIMATOLOGICAL DATA

Inclusive 1957 - 1961

SECTION VI SOIL

GENERAL SOIL CHARACTERISTICS

The following is a resume of the characteristics of the various types of soil found in the six county impact area.

Soils that normally occur together in a characteristic geographic pattern can be said to make up a general soil area, also called a soil association. A general soil area may contain many soils or only a few. The nature of the general soil area influences not only the type of agriculture, but also the agricultural practices required for the proper use and maintenance of the soils.

The soils within each general area are somewhat similar in relief, drainage, reaction, and in the kind of parent material from which they have formed. They differ from each other in one or more minor characteristics; such as color, texture, or the amount of organic matter in the surface soil.

Generally, the soil types within all six counties have similar suitability for crops and may be expected to respond in about the same way if given similar management.

SOIL SURVEY DEFINITIONS*

Color: Normally related to drainage and the amount of organic matter in the soil. The darker the surface soil, as a rule, the more organic matter.

Consistence: The tendency of the soil to crumble or to stick together indicates whether it is easy or difficult to keep the soil open and porous under cultivation.

Texture: The relative proportions of sand, silt, and clay are determined by the way the soil feels when rubbed between the fingers. Texture determines how well the soil retains moisture, plant nutrients, fertilizer, and whether the soil is easy or difficult to cultivate.

Structure: The way the individual soil particles are arranged in larger aggregates or peds and the amount of pore (open) space between the aggregates.

* Soil, 1957 Yearbook of Agriculture.

CLASSIFICATION

Soil Type: Soils similar in kind, thickness, arrangement of horizons, and having essentially the same texture in the surface soil are classified as members of one soil type.

Soil Phase: Soil types are frequently divided into phases because of differences other than those in kind, thickness, and arrangement of horizons. Frequently these differences are significant in managing the soil. Among the characteristics that suggest dividing a soil type into phases are variation in slope, frequency of rock outcrop, degree of erosion, and depth of soil over subsoil.

Soil Series: Two or more soil types that are similar in kind, thickness, and arrangement of soil layers. In some places, however, a soil series may be represented by only one soil type. Each soil series is named for a place near which it was first mapped.

Miscellaneous Land Types: Areas that have little true soil are not classified in types, phases, or series; they are identified by descriptive names.

Undifferentiated Soil Groups: If two or more soils that normally do not occur in regular geographic association are so intricately mixed that separate mapping is impractical, the soils are mapped together as an undifferentiated soil group. The group is named for the soils in it.

PRINCIPAL CHARACTERISTICS OF THE SOIL SERIES

<u>Series</u>	<u>Relief</u>	<u>Drainage</u>	<u>Parent Material</u>
Adamsville	Level	Somewhat Poor	Moderately thick deposits of sand over alkaline materials.....
Blanton	Level to Sloping	Somewhat Excessive to Good	Moderately thick deposits of sand
Brighton	Level or Depressed	Very Poor	Remains of lilies, bonnets, and other aquatic plants over acid sand and clay.....

<u>Series</u>	<u>Relief</u>	<u>Drainage</u>	<u>Parent Material</u>
Charlotte	Level or Depressed	Poor	Moderately thick deposits of sand over alkaline materials.....
Delray	Level or Depressed	Poor to very Poor	Same as above....
Esto	Gently Sloping and Sloping	Moderately Good	Thin deposits of sand over acid, clayey materials.
Eustis	Level to Very Gently Sloping	Somewhat Excessive to Good	Thick deposits of sand.
Everglades	Level or Depressed	Very Poor	Remains of saw-grass likes, sedges, and grasses over alkaline sands and sandy clay.....
Felda	Level or Depressed	Poor to very Poor	Thin deposits of sand over alkaline clayey materials..
Immokalee	Level	Somewhat Poor	Moderately thick deposits of sand...
Keri	Level	Somewhat Poor	Sands stratified with thin layer of marl.
Lakeland	Level to Strongly Sloping	Somewhat Excessive to Good	Thick deposits of sand.....
Leon	Level to Nearly Level	Somewhat Poor	Moderately thick deposits of sand...

<u>Series</u>	<u>Relief</u>	<u>Drainage</u>	<u>Parent Material</u>
Manatee	Level or Depressed	Poor to Very Poor	Thin deposits of sand over alkaline clayey materials
Ona	Level	Somewhat Poor to Very Poor	Moderately thick deposits of sand and loamy sand
Orlando	Level to very Gently Sloping	Somewhat Excessive to Moderately Good	Thick deposits of sand and loamy sand.....
Pamlico	Level or Depressed	Very Poor	Mixture of acid sand underlying remains of lilies, bonnets, sedges, and grasses....
Parkwood	Level	Somewhat Poor	Moderately thin deposits of sand over a thick layer of marl.....
Plummer	Level or Depressed	Poor to very Poor	Moderately thick deposits of sand
Pomello	Level to Nearly Level	Poor to very Poor	Moderately thick deposits of sand over alkaline materials.....
Rutlege	Level or Depressed	Poor to very Poor	Moderately thick deposits of sand
St. Johns	Level	Somewhat Poor	Same as above....
St. Lucie	Level to Very Gently Sloping	Excessive	Thick deposits of sand.....
Scranton	Level	Somewhat Poor to Poor	Moderately thick deposits of sand..

MAJOR SOIL ASSOCIATIONS IN SIX COUNTY IMPACT AREA

Lakeland-Eustis-Norfolk association occupies the northern and the central portions of Volusia as well as the northwestern half of Seminole and Orange Counties. A very small portion of the association can also be found in the northwestern corner of Osceola County. The majority of this general soil area is found in Orange and Seminole Counties.

Leon-Plummer-Rutlege, Leon-Immokalee-Pompano, Leon-Pomello-Plummer, Leon-Blanton-Plummer associations are extensive in Volusia, Orange, and Seminole Counties. The general soil areas are found to dominate land areas near the coasts of Brevard and Indian River. Only a small portion of the general soil area can be found in the interior of Seminole and Osceola Counties.

Pompano-Charlotte-Delray, Manatee-Felda associations are located along the eastern borders of Seminole and Orange Counties. They extend southward through central Brevard and Indian River. Scattered groupings of these associations may be found in the central portions of Seminole and Osceola Counties.

Adamsville-Pompano, Sunniland-Bradenton associations are restricted to narrow land belts. These belts are located near Daytona Beach of Volusia County, upper and central Brevard, and the northwestern part of Osceola County.

St. Lucie-Lakewood-Pomello, Palm Beach-Cocoa associations are located near the coastal areas of Volusia, Brevard, and Indian River Counties. Volusia County contains a large portion of this general soil area in its central and southern most districts.

Refer to the six county area soil map of this report for the general geographic locations of the various soil associations.

**MAJOR SOIL TYPES AND TEXTURES
FOUND IN SIX COUNTY IMPACT AREA**

1. Area Dominated by Excessively Drained Soils:

Soils dominantly thick acid sands.
(St. Lucie-Lakewood-Pomello association)

Soils dominantly thick neutral to alkaline sands.
(Palm Beach-Cocoa association)

2. Areas Dominated by Well Drained to Moderately Well Drained Soils:

Soils dominantly thick to moderately thick acid sands.
(Lakeland-Eustis-Blanton association)
(Lakeland-Eustis-Norfolk association)

3. Areas Dominated by Somewhat Poorly Drained Soils:

Soils dominantly thick acid sands with organic pans; interspersed with soils without a pan formation.

(Leon-Plummer-Rutlege association)
(Leon-Immokalee-Pompano association)
(Leon-Pomello-Plummer association)
(Leon-Blanton-Plummer association)

Soils dominantly thick to thin sands overlying finer-textured alkaline materials.

(Adamsville-Pompano association)
(Sunniland-Bradenton association)

4. Areas Dominated by Poorly to Very Poorly Drained Soils:

Soils dominantly moderately thick to thin sands to sandy loams overlying finer-textured alkaline materials.

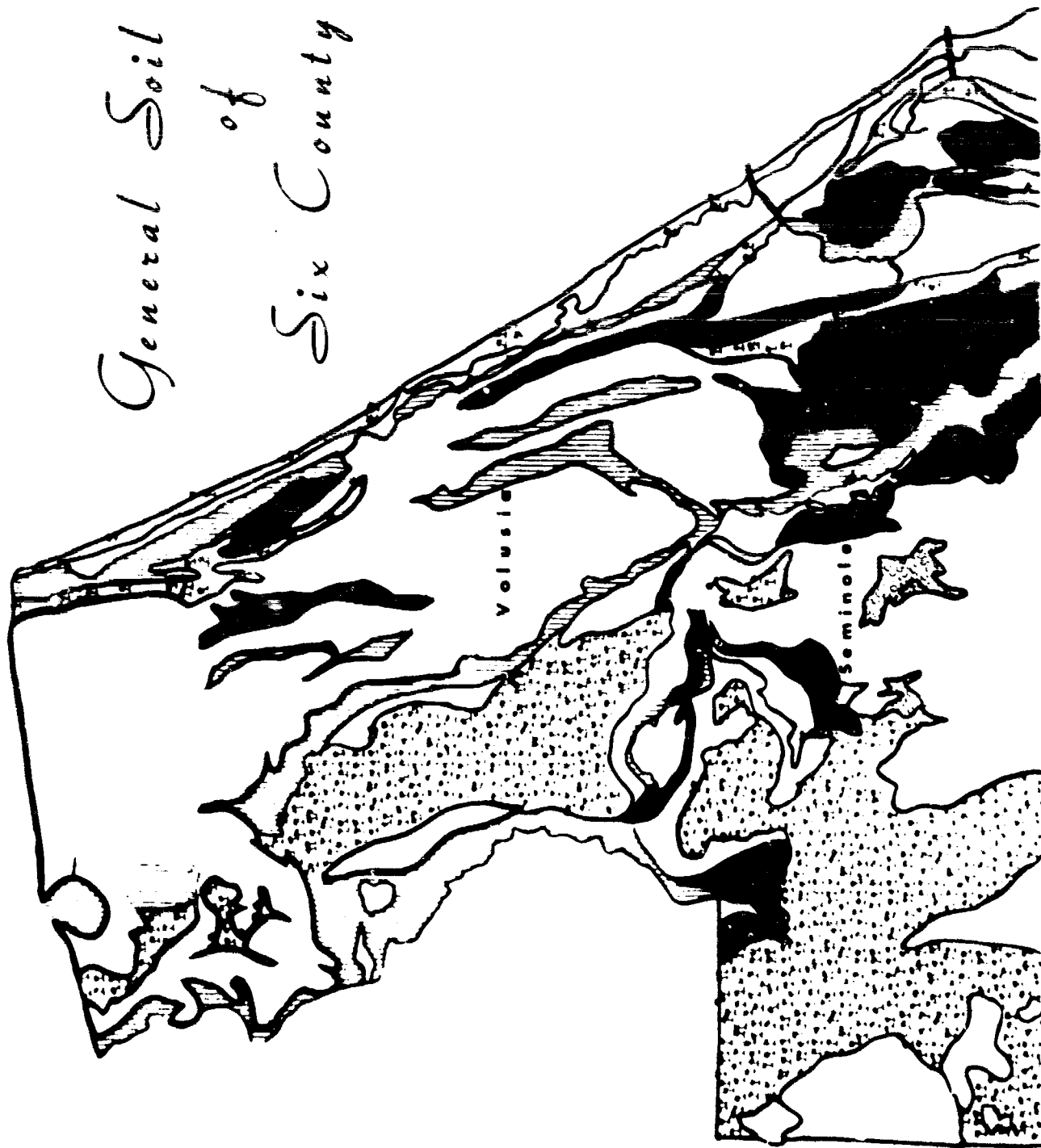
(Pompano-Charlotte-Delray association)
(Manatee-Felda association)

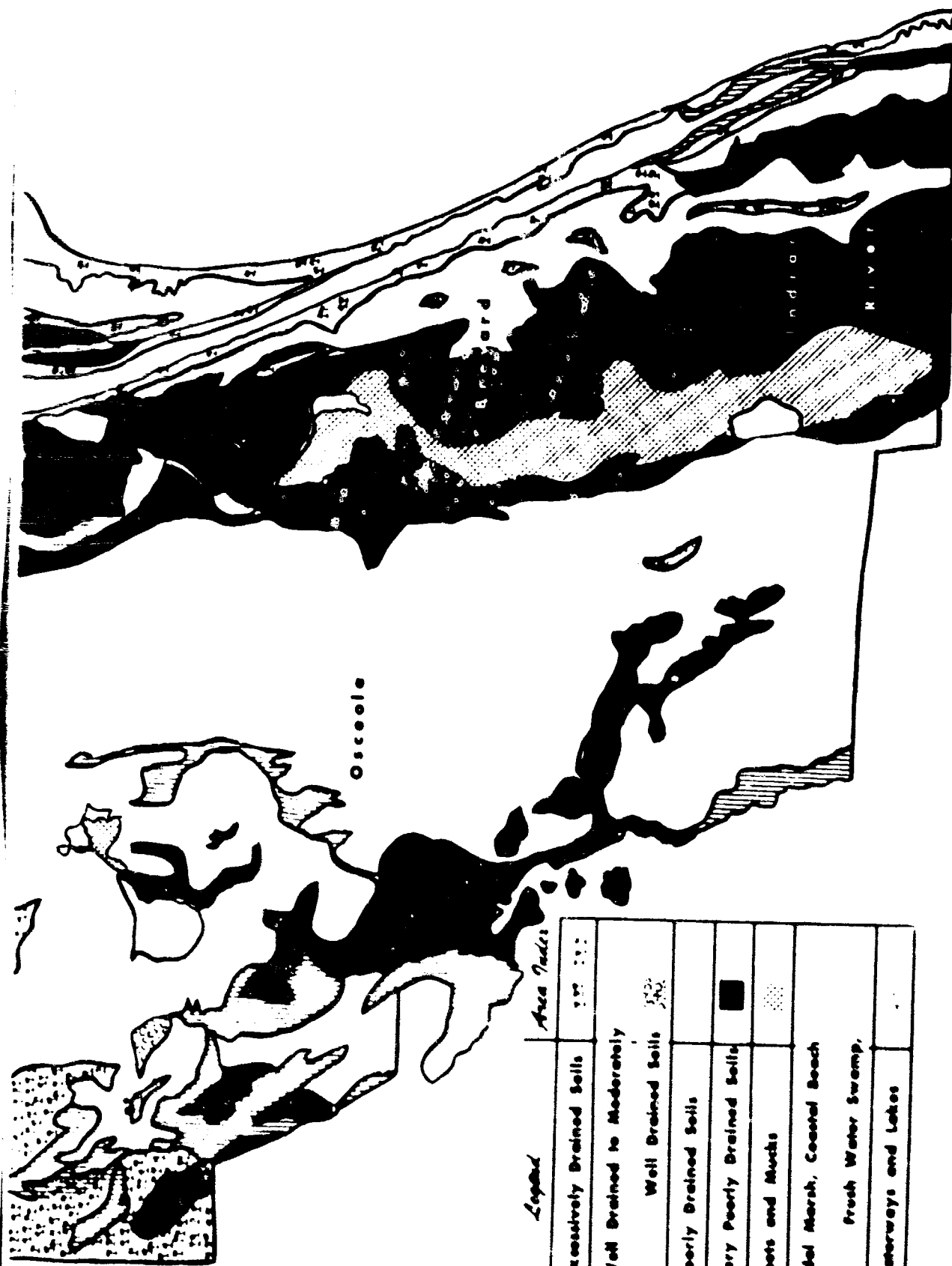
Soils dominantly peats and mucks.
(Everglades-Brighton-Pamlico association)

5. Miscellaneous Land Types:

Fresh Water Swamp - Marsh
Tidal Marsh - Coastal Beach - Coastal Dunes

*General Soil Map
of
Six County Area*





MAJOR SOIL ASSOCIATIONS FOUND IN BREVARD COUNTY

A heavy concentration of organic soil with more than 12 inches of peat and muck border the St. John's River. Throughout this area, fresh water marsh and swamp lands are found.

In association with the above soil aggregates, a poorly drained, slightly acid to calcareous soil, with more than 30 inches of sand surface, cover calcareous deposits. Leon-Immokalee-Pompano. Adamsville-Pompano associations extend eastward to Route A1A. This general soil area is characterized by the fluctuation of ground water within the solum; however, the area adjacent to the river is approximately 20 feet above sea level and not generally marshy.

From Route A1A to the Indian River, soils are not affected by the water table. Merritt Island consists of many different soil associations. Scattered salt water marsh and swamp land, dunes and beaches, deep soils with more than 30 inches of sand surface, and soils which cover calcareous sand clay deposits may be found. Poorly drained soils with an organic pan; interspersed with numerous neutral to calcareous sloughs and swamps are found in the northernmost aspect of the island. The remainder of the barrier islands is a system of beach ridges that generally parallel the present shore line. They are continuous along the full north-south length of the county and are from a few hundred yards to a mile in width from east to west; except Cape Canaveral which is 4.5 miles wide.

In the Cape Canaveral area and extending southward through Sebastian Inlet, Brevard County, St. Lucie-Lakewood-Palm Beach Lakeland-Blanton associations are characteristic of the general soil groupings.

Major soil associations found in the county are: Everglades-Brighton-Pamlico, Pompano-Charlotte-DeRay, Leon-Immokalee-Pompano.

VEGETATION

The native vegetation consist mainly of palmetto, wire grasses, marsh grasses, occasional hammocks and small clusters of cypress trees.

MAJOR SOIL ASSOCIATIONS FOUND IN INDIAN RIVER COUNTY

Near Osceola County and extending eastward for 3-1/2 miles a low, poorly drained area is found. Here the ground water fluctuates within the solum. As the soil level rises, organic stained pan with 30 inches of sand surface interspersed with swamp and marsh lands can be seen. These areas are composed of the Leon-Plummer-Rutledge, Leon-Immokalee-Pompano, and Adamsville-Pompano associations. Moving eastward a shallow ground water table, which frequently rises above the surface, in association with a poorly drained 12 inch peat and muck area high in its concentration of calcareous materials lends itself to a 30-inch sand cover of rock and marble substratum around Blue Cypress Lake.

Interspersed within the above areas, around Blue Cypress Lake, sandy clay loams and clay subsoils can be found. Three-fourths of a mile from the Lake, fresh water marsh and swamp land again illustrates their dominance over other associations.

Extending southward in a belt, from Brevard County to the south-central portion of Indian River County, an Everglades-Brighton association prevails. This general soil type extends north to south for 18 miles and east to west for approximately 11 miles.

Moving eastward, out of this peat and 12-inch muck belt, a nearly level, slightly acid to neutral, sandy clam loam or calcareous sand clay subsoils exist.

Three miles from the Indian River a nearly level, deep, strongly acid, somewhat poorly drained soil with an organic stained pan, interspersed with numerous neutral to calcareous sloughs and swamps, runs north to south for 16 miles.

Major soil associations found in the county are: Pompano Charlotte-Delray, Manatee-Felda, Everglades-Brighton, Leon-Immokalee-Pompano.

MAJOR SOIL ASSOCIATIONS FOUND IN ORANGE COUNTY

North of Lake Apopka, a very low area called the Zellwood Muck Sands, characterizes a very poorly drained organic soil. It is in this four mile by five mile area where most of Orange County's vegetable crops are grown. At one time this land was put into pasture; however, because of insufficient draining practices, the program was abandoned and row crops were substituted.

Bordering the northern edge of the Zellwood muck area, named after the City of Zellwood, a poorly drained soil association composed of the Leon-Immokalee-Pomello-St. Johns series illustrates its dominance. This association tends to be the characteristic soil series throughout most of Orange County.

Bordering Lake County and extending southward around the Zellwood muck area and Lake Apopka to Osceola County and eastward to Orlovista a very excessively drained soil association can be found. It is in this area where the majority of the citrus products are grown for commercial purposes. This Lakeland-Eustis-Blanton-Orlando association extends eastward to Lake Maitland in its northern aspect and continues southward to Pine Castle and Lake Conway.

Near the village of Doctor Phillips, surrounding Big Sand Lake, an excessively drained soil grouping extends north to south for eleven miles and east to west for three miles.

For the most part, the remaining lands are somewhat poorly drained, having characteristic Leon-Immokalee-Pomello-St. Johns soil associations. Around Lake Mary Jane and Lake Hart a very poorly drained, heavy organic soil association illustrates a marked low relief. Moving eastward to within 4 to 10 miles of the St. John River, a low, often times flooded, land can be seen. Within two miles from the river a very poorly drained area, which is actually an overflow area, can be found.

Major soil associations found within Orange County are: Leon-Immokalee-Pomello-St. Johns, Lakeland-Eustis-Blanton-Orlando, and Adamsville-Pompano-Delray.

VEGETATION

As a result of the merging of subtropical and warm-temperate

climates in this area, many kinds of plants grow in Orange County. Differences in natural drainage and in soil characteristics also effect the kinds of plants growing there. Many types of vegetation are associated with a particular kind of soil.

Originally, much of the county was covered by a dense stand of pine. Most of the original trees, except those in some of the fresh-water swamps, have been cut. Subsequent stands of trees, mostly of small size, have also been cut in some areas, either for lumber or to clear the soils for crops and pasture.

Longleaf pine, a few shrubs, and grasses originally grew on the somewhat excessively drained and well-drained, deep, sandy soils. After the pine trees were removed, turkey and bluejack oaks and a few longleaf pines became established on these soils. Live oaks grew on some of the wetter areas. Much of the acreage that has been cleared is used for improved pasture or to grow citrus trees.

A scrubby vegetation consisting of scrub live oak, sand pine, rosemary, and a few turkey and bluejack oaks, saw-palmettos, and grasses grow on the excessively drained, deep, sandy soils.

Much of the eastern and southern parts of the county are nearly level soils which are somewhat poorly drained, and very poorly drained. These areas are commonly called flatwoods. The vegetation consists dominantly of pine, saw-palmetto, gallberry, runner oak, huckleberry, and wiregrass. In addition to these plants, there are cabbage palmetto, live oak, myrtle bushes, and vines in the areas near the St. Johns River that contain alkaline soil materials. Large areas of the flatwoods have been cleared and seeded to improved pastures.

Many ponds and shallow lakes contain, or are surrounded by, short grasses, sedges, lilies, bonnets, and other aquatic plants. Sedges, sawgrass, reeds, grasses, and a few shrubs once grew in the large marsh north of Lake Apopka.

The swamps in the interior of the county contain a mixture of trees and shrubs including cypress, gum, elm, hickory, magnolia, live and water oaks, maple, cabbage palmetto, and various kinds of vines, shrubs, and grasses. A limited number of areas contain trees of a size and quality suitable for lumber.

MAJOR SOIL ASSOCIATIONS FOUND IN OSCEOLA COUNTY

St. Lucie-Lakewood and Lakeland-Eustis associations are found in the northwestern part of the county. This area clearly illustrates those soils which are not affected by the ground water table with but one exception of fresh water marshland located in the middle of the general soil types.

Moving eastward, low swamp lands tend to predominate. Occasionally, soils not affected by the ground water table can be found.

To the west of Lake Tohopekaliga the soil tends to become more alkaline and generally lower in elevation enabling the ground water to fluctuate within the solum.

Kissimmee is located on generally level, yet sloping land, which is moderately well drained. The 30 inches of sand surface tends to be acid in content. This soil association can be found extending to the western portion of East Tohopekaliga Lake.

A Blanton-Plummer association is found south of St. Cloud. It contains irregular areas of fresh water marsh and swamp lands. This association extends to the eastern boundary of the county and north to south from Orange County to Okeechobee County. Occasionally, low areas occur where the water fluctuates within the solum.

Major soil associations found in the county are: Leon-Plummer-Rutlege, Leon-Immokalee-Pompano, Leon-Pomello-Plummer, Pompano-Charlotte-Delray, Fresh Water Swamp and Marsh.

MAJOR SOIL ASSOCIATIONS FOUND IN SEMINOLE COUNTY

Fresh water marsh and swamps are located around the Wekiva River. Immediately adjacent to these marsh lands, there is an area approximately 1-1/2 miles wide, which is somewhat poorly drained, with more than 30 inches of sand surface and organic stained pan; interspersed with numerous swampy areas.

East of this area, lies a large tract of Lakeland-Eustis soils. This association extends southward to Orange County and eastward to Casselberry and south Sanford.

Level and gently sloping land, strongly acid, and somewhat poorly drained soils, being interspersed with numerous swamp and marsh areas, characterizes the soil associations around Lake Jessup.

North of Oviedo and southeast of Lake Jessup, a Pompano-Charlotte-Delray association exists. Immediately to the east of this area, a Leon-Plummer-Rutlege association prevails. The general soil grouping above is rather extensive in this area.

Near Geneva, a Lakeland-Eustis arrangement can be found.

Bordering the Econlockhatchee River, a profuse fresh water marsh and swamp land dominates other associations.

To the east of Chuluota, a Blanton-Plummer aggregate; interspersed with numerous low, marshy areas exists.

West of Lake Harney and extending southward through sections 23, 26, 35, 2, 11, 13, 24, 26, 34 to the St. John's River, a level, poorly drained, slightly acid to calcareous soil, with more than 30 inches of sand surface over calcareous materials may be found.

Major soil associations found in the county are: Lakeland-Eustis-Blanton, Leon-Plummer-Rutlege, Leon-Pomello-Plummer, Pompano-Charlotte-Delray, Fresh Water Swamp and Marsh, St. Lucie-Lakewood-Pomello.

MAJOR SOIL ASSOCIATIONS FOUND IN VOLUSIA COUNTY

Two miles east of Lake Woodruff, extending north and south in a straight line, involving the northwestern portion of the county, a general soil area consisting of the Leon-Plummer-Rutlege, Bradenton-Sunniland, Leon-Immokalee-Pompano associations is found. Interspersed among the above areas numerous fresh water marsh and swamp lands exist.

The city of DeLand is located on a Lakeland-Blanton soil belt, which extends north to south for approximately 18 miles and east to west for approximately 8 miles. Immediately surrounding this belt, nearly level or slightly sloping, strongly acid, excessively drained, deep soils with more than 30 inches of sand surface can be found.

Inland, extending north to south from Ormond Beach to Maytown and east to within one-half mile of Daytona Beach (approximately 4 miles wide), is a Leon-Plummer-Rutlege association which is interspersed with numerous marshes and swamps. This association tends to dominate other soil aggregates. South of Lake Harney, a very low, fresh water swamp area is found. In a north to south belt, near the coast, a Bradenton-Sunniland association predominates. The immediate coastal area illustrates an excessively drained sandy loam, which is level to sloping and contains 30 inches of sand surface.

Major soil associations found in this county are: Leon-Plummer-Rutlege, Lakeland-Eustis-Blanton, Fresh Water Swamp and Marsh, St. Lucie-Lakewood-Pomello, Sunniland-Bradenton.

SECTION VII AGRICULTURE

DEFINITIONS

(1) Cropland - Land (currently) tilled including cropland harvested, crop failure, summer fallow, idle cropland, cropland in cover crops or soil-improvement crops not harvested or pastured, rotation pasture, and cropland being prepared for crops or newly seeded crops. Cropland includes all tame hay and also wild hay harvested east of the Mississippi. It includes land in vegetables, fruits, and nuts including those grown on farms for home use.

(2) Pasture and Range - Land in grass or other long-term foliage growth that is used primarily for grazing. Pasture and range include grassland, non-forested pasture, wild hay harvested in states west of the Mississippi, and other grazing land with the exception of pasture in the crop rotation. It may contain shade trees or scattered timber trees with less than 10 per cent canopy, but the principal plant cover is such as to identify its use primarily as permanent grazing land. In states or counties having extensive areas of rangeland, it will be desirable to separate pasture (primarily of introduced grasses) from range (or native grasses.)

(3) Forest and Woodland - (A) Lands which are at least 10 per cent stocked by forest trees of any size and capable of producing timber or other wood products or capable of exerting an influence on the water regime, (B) Lands from which the trees described in (A) have been removed to less than 10 per cent stocking and which have not been developed for other use.

(A) In Farms or Operated for Production of Forest Products - Forest and woodland which is part of a farm, and all other forest and woodland which (1) is producing or physically capable of producing usable crops of wood, (2) economically available now or prospectively, and (3) not withdrawn from timber utilization.

(B) Other Forest and Woodland - Forest and woodland not a part of a farm, which is (1) withdrawn from timber utilization by public agencies, corporations, or private persons, or (2) incapable of yielding usable wood products because of adverse site conditions or so physically inaccessible as to be unavailable for special uses other than timber production, such as state parks, monuments, natural areas, and game preserves.

- (4) Other Land - Farmsteads and idle (as formerly mapped on the soil survey) wildlife areas and other areas not classified into cropland, pasture and range, forest and woodland, and builtup and urban areas.

(A) In Farms - A farm as defined for the inventory is a unit of one or more tracts of land under one management, some portion of which normally is used for the production of field crops, pasture, or range, other than that used for the producer's family. It includes forest and woodland or other land commonly considered as part of such a unit.

(B) Not in Farms -

** Policy and Procedure for Development of National Inventory of Soil and Water Conservation Needs -

U. S. Department of Agriculture
Washington, D. C.
August 1957

GENERAL LAND USE IN BREVARD COUNTY1959⁽¹⁾ and 1962⁽²⁾

	<u>1959</u>	<u>1962*</u>
Total Land Area in County, Square Miles	1,032	1,032
Total Land in County, Acres	660,480	660,480
<hr/>		
Cropland Harvested, Acres	11,592	21,850
Citrus		
Acres.....	11,355	21,000
Number of Trees	738,090	1,400,000
Hay		
Acres.....	200	200
Tons	500	500
Vegetables, Acres	37	650
Tomatoes, Acres		300
Melons, Acres.....	2	50
Mixed, Acres		150
Misc: Truck, Flowers, and Bulbs, Acres	35	150
Cropland Not Harvested and Not Pastured, Acres. .	1,330	1,330
Cropland, Total Acres.....	12,922	23,180
Cropland Used Only for Pasture, Acres	1,873	1,873
Woodland Pasture, Acres.....	76,958	65,000
Improved Pasture, Acres.....	23,457	50,000
Other Pasture, Acres	131,115	110,000
Total Pasture, Acres	234,403	226,873
Woodland Not Pasture, Acres.....	12,842	10,000
Federal Land, Acres	15,000	90,000
Other Land (Lakes, Rivers, Roads, House Lots, Wastelands, etc.)	385,313	310,427

*Estimated as of January 1963 (1) Source: U.S. Agricultural Census-
(2) Est. by County Agricultural Agent 1960

LIVESTOCK AND POULTRY CENSUS FOR BREVARD COUNTY

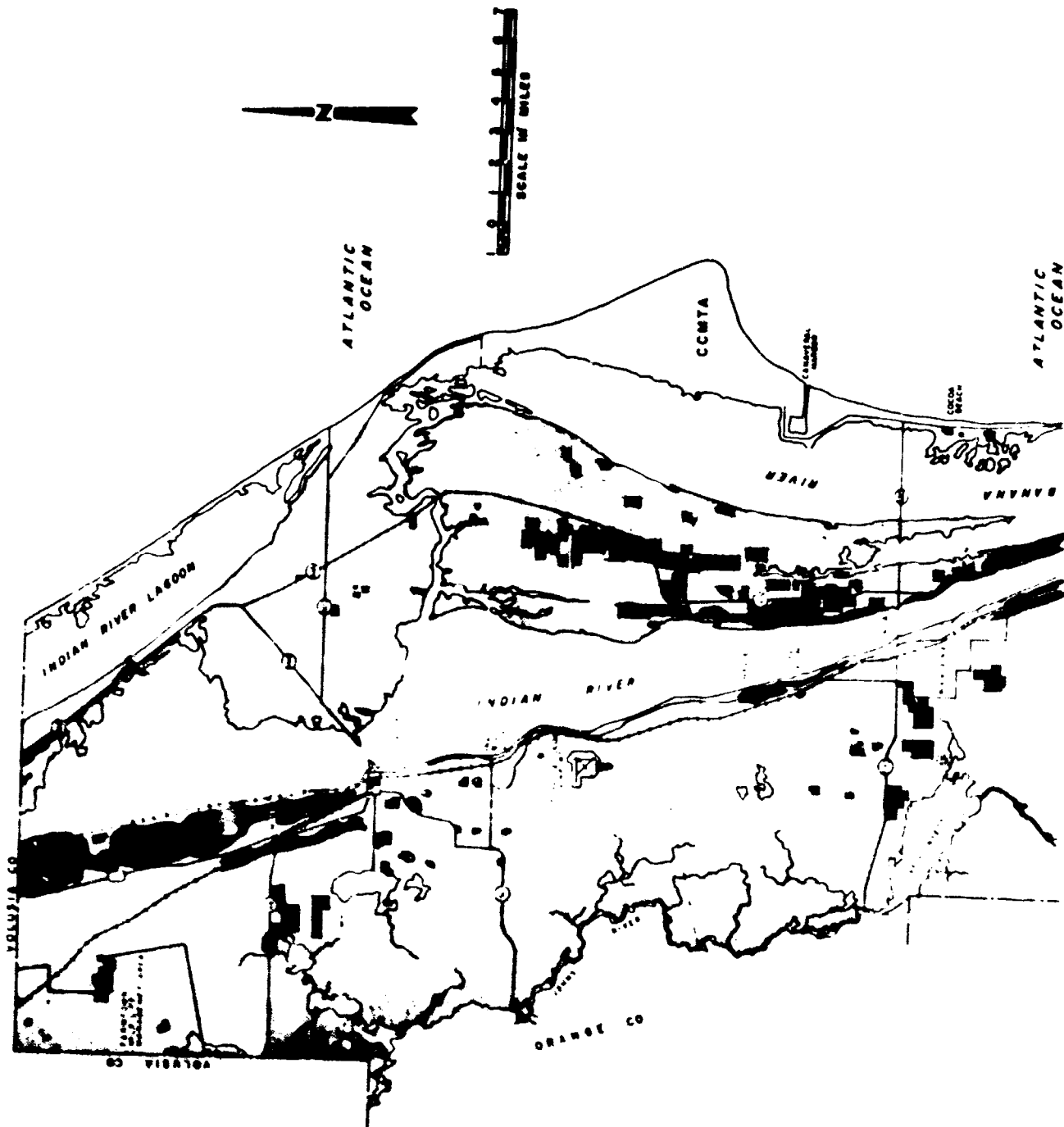
1959⁽¹⁾ and 1962⁽²⁾

	<u>1959</u>	<u>1962*</u>
Beef Cattle and Calves	20,709	45,000
Milk Cows	464	464
Horses and Mules	229	500
Hogs and Pigs	223	223
Sheep and Lambs	0	0
Total Livestock in County	21,625	46,197
Chickens (4 months or older)	2,724	15,000

*Estimated as of January 1963

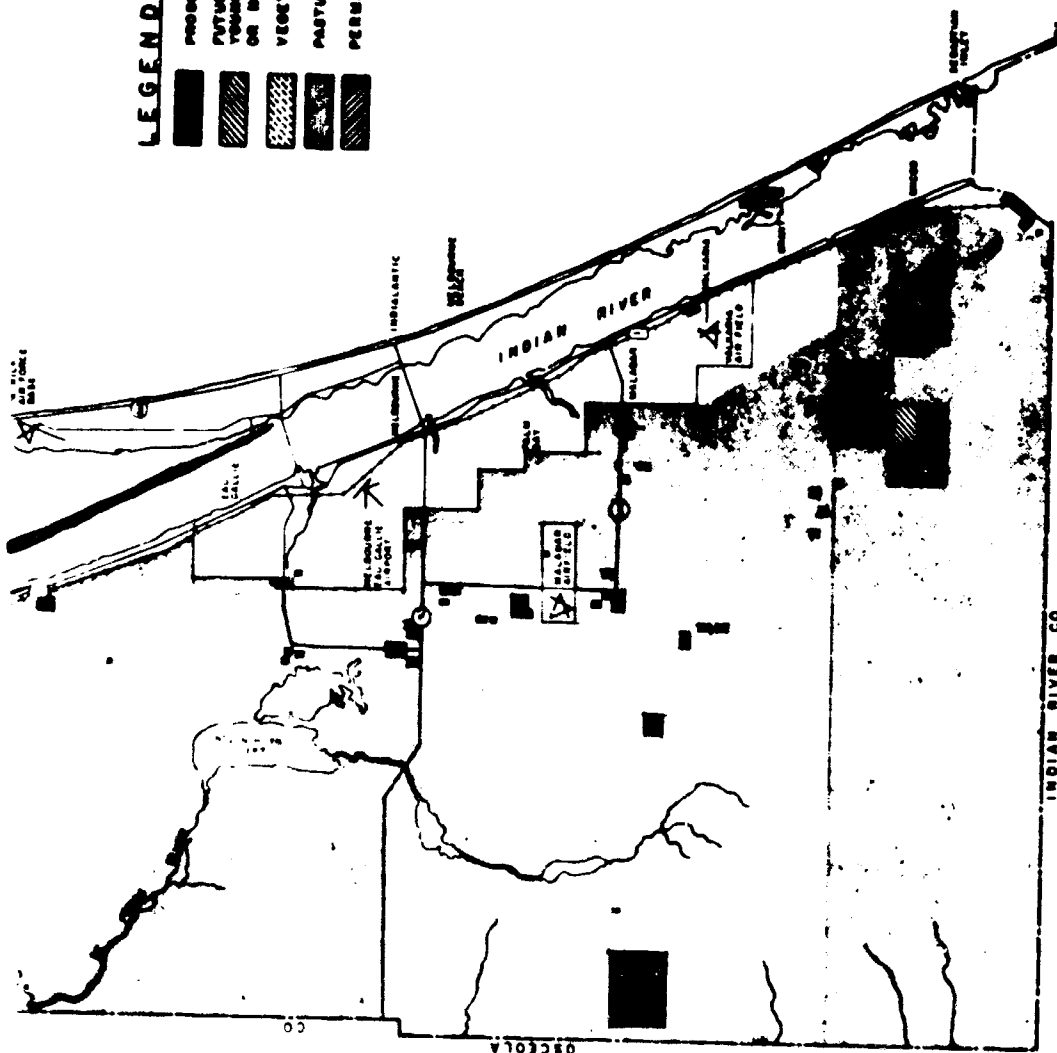
(1) Source: U. S. Agricultural Census - 1960

(2) Estimates by County Agricultural Agent



LEGEND:

- PRODUCING CITRUS ACREAGE
- FUTURE CITRUS ACREAGE OR
YOUNG NON-PRODUCING GROVE
OR NON-BEARING CITRUS ACREAGE
- VEGETABLE ACREAGE
- PASTURE LAND
- PERMANENT TYPE PASTURE LAND



BREVARD COUNTY

III-33

GENERAL LAND USE IN INDIAN RIVER COUNTY

1959⁽¹⁾ and 1962⁽²⁾

	<u>1959</u>	<u>1962*</u>
Total Land Area in County, Square Miles	512	512
Total Land Area in County, Acres	327,040	327,040
<hr/>		
Cropland Harvested, Acres	29,585	36,700
Citrus		
Acres	19,149	22,500
Number of Trees	1,231,541	1,462,500
Vegetables		
Acres	10,436	14,200
Tomatoes, Acres	1,400	1,500
Melons, Acres	730	700
Sugar Cane, Acres	8,306	11,500
Misc: Truck and Flowers		500
Cropland Not Harvested and Not Pastured, Acres ..	14,290	3,400
Cropland, Total Acres	43,875	40,100
Total Pasture, Acres	108,642	115,000
Forest and Woodland, Acres	87,639	91,183
Other Land (Lakes, Roads, Rivers, House Lots, Wastelands, etc.)	86,884	80,757

*Estimated as of January 1963.

(1) Source: U. S. Agricultural Census - 1960.

(2) Estimated by County Agricultural Agent.

LIVESTOCK AND POULTRY CENSUS FOR INDIAN RIVER COUNTY

1959⁽¹⁾ and 1962⁽²⁾

	<u>1959</u>	<u>1962*</u>
Beef Cattle and Calves	16,861	20,000
Milk Cows	1,775	1,900
Horses	193	180
Hogs and Pigs	339	339
Sheep and Lambs	74	74
Total Livestock in County	19,242	22,493
Chickens (4 months)	13,751	14,000

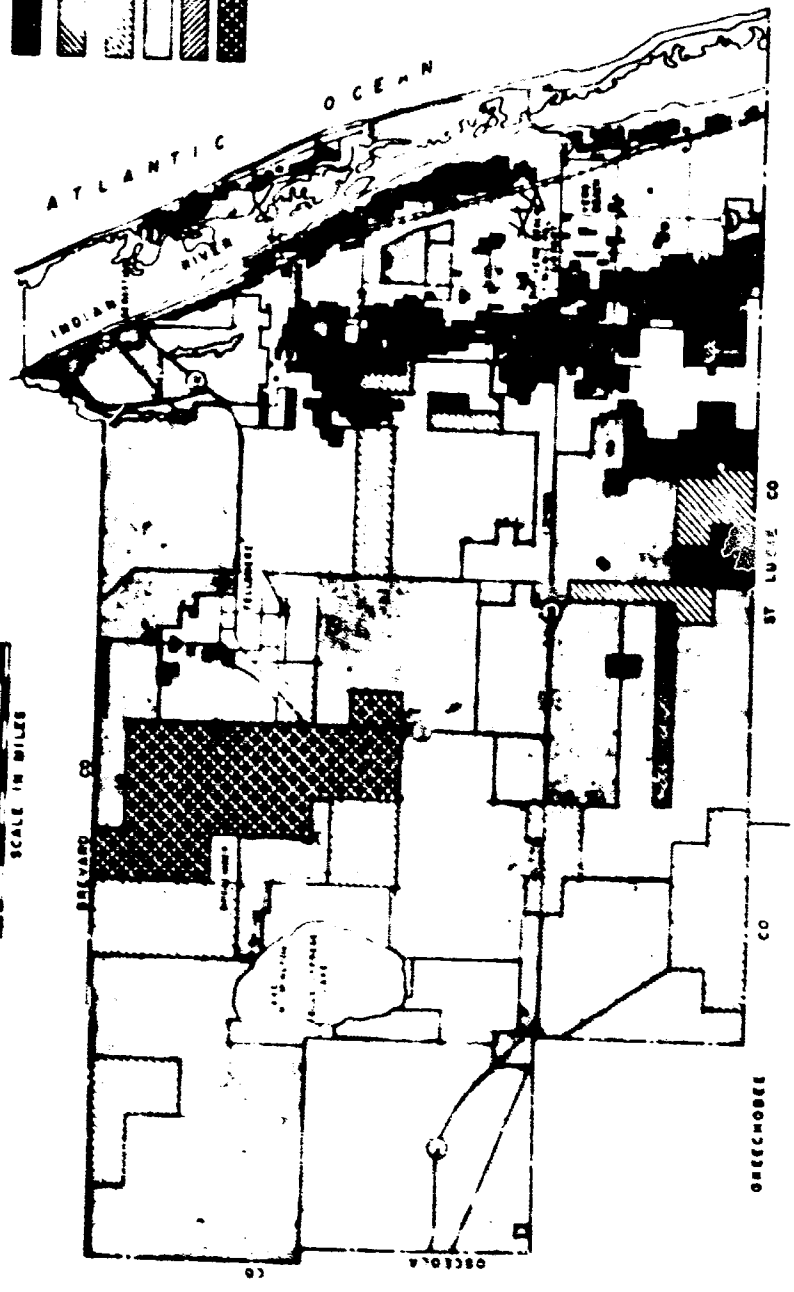
*Estimated as of January 1963.

(1) Source: U. S. Agricultural Census - 1960.

(2) Estimated by County Agricultural Agent.



- LEGEND:**
- PRODUCING CITRUS ACRES
 - FUTURE CITRUS ACRES
 - YOUNG NON-PRODUCING GROVE
 - ON NON-BEARING CITRUS ACRES
 - VEGETABLE ACRES
 - PASTURE LAND
 - PERMANENT TYPE PASTURE LAND
 - SUGAR CANE ACRES



INDIAN RIVER COUNTY

GENERAL LAND USE IN ORANGE COUNTY1959⁽¹⁾ and 1962⁽²⁾

	<u>1959</u>	<u>1962</u>
Total Land Area in County, Square Miles	916	916
Total Land Area in County, Acres	586,240	586,240
<hr/>		
Cropland Harvested, Acres	78,080	80,900
Citrus		
Acres	69,000	68,000
Number of Trees	4,485,000	4,420,000
Vegetables, Acres	9,080	12,900
Sweet Corn, Acres	5,285	5,500
Leaf Crops, Acres	1,000	1,700
Beans, Acres	835	2,000
Celery, Acres	1,260	2,090
Spinach, Acres	700	1,700
Cropland Not Harvested and Not Pastured, Acres	9,980	8,000
Cropland, Total Acres	88,060	88,900
Cropland Used Only for Pasture, Acres	23,655	21,500
Woodland Pasture, Acres	101,045	85,000
Improved Pasture, Acres	20,739	18,000
Other Pasture, Acres	28,978	28,000
Total Pasture, Acres	174,417	152,500
Woodland Not Pasture, Acres	34,332	35,000
Other Land (Lakes, Rivers, Roads, House Lots, Wastelands, etc.)	289,431	309,840

(1) Source: U.S. Agricultural Census - 1960

(2) Estimates by County Agricultural Agent

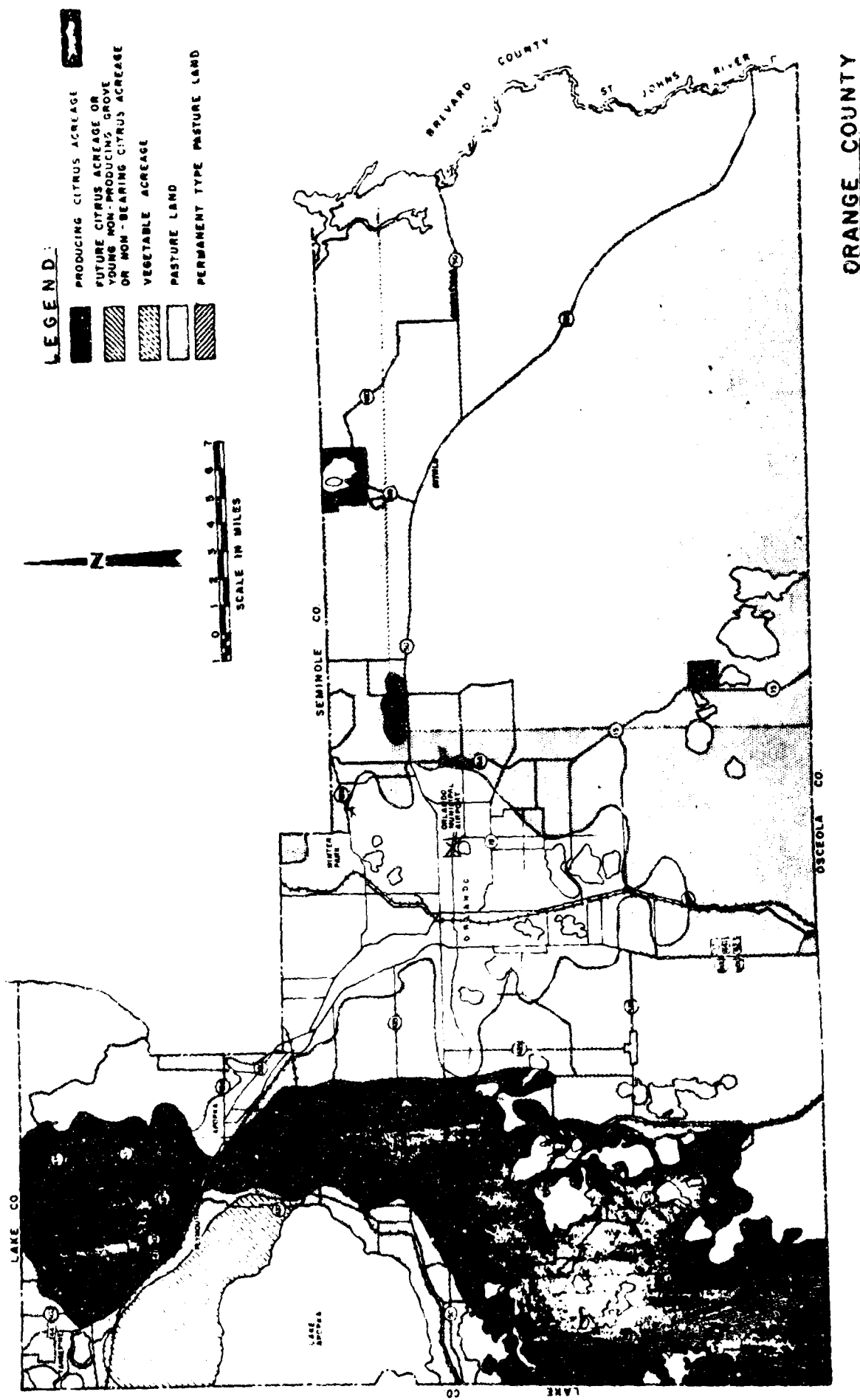
LIVESTOCK AND POULTRY CENSUS FOR ORANGE COUNTY1959⁽¹⁾ and 1962⁽²⁾

	<u>1959</u>	<u>1962*</u>
Beef Cattle and Calves	26,383	23,000
Milk Cows	6,927	7,000
Horses and Mules	323	500
Hogs and Pigs	410	600
Sheep and Lambs	50	50
Total Livestock in County	34,093	31,150
Chickens (4 months or older)	96,865	180,000

*Estimated as of January, 1963

(1) Source: U.S. Agricultural Census - 1960

(2) Estimates by County Agricultural Agent



GENERAL LAND USE IN OSCEOLA COUNTY1959⁽¹⁾ and 1962⁽²⁾

	<u>1959</u>	<u>1962*</u>
Total Land Area in County, Square Miles	1,325	1,325
Total Land Area in County, Acres	848,000	848,000
Land in Farms, Acres	814,959	820,000
<hr/>		
Cropland Harvested, Acres	11,050	15,775
Citrus		
Acres	9,800	12,500
Number of Trees	637,000	815,000
Hay		
Acres	1,100	3,000
Tons	2,000	7,500
Vegetables, Acres	150	275
Tomatoes, Acres	100	175
Misc: Truck, Flowers, and Bulbs, Acres . . .	50	100
Cropland Not Harvested and Not Pastured, Acres.	1,006	1,000
Cropland, Total Acres	12,056	16,775
Cropland Used Only for Pasture, Acres	10,598	12,000
Woodland Pasture, Acres	420,665	420,000
Improved Pasture, Acres	92,457	120,000
Other Pasture, Acres	221,469	215,000
Total Pasture, Acres	745,189	767,000
Woodland Not Pasture, Acres	3,888	2,225
Other Land (Lakes, Rivers, Roads, House Lots, Wastelands, etc.)	86,867	62,000

*Estimated as of January 1963

(1) Source: U.S. Agricultural Census - 1960

(2) Estimated by County Agricultural Agent

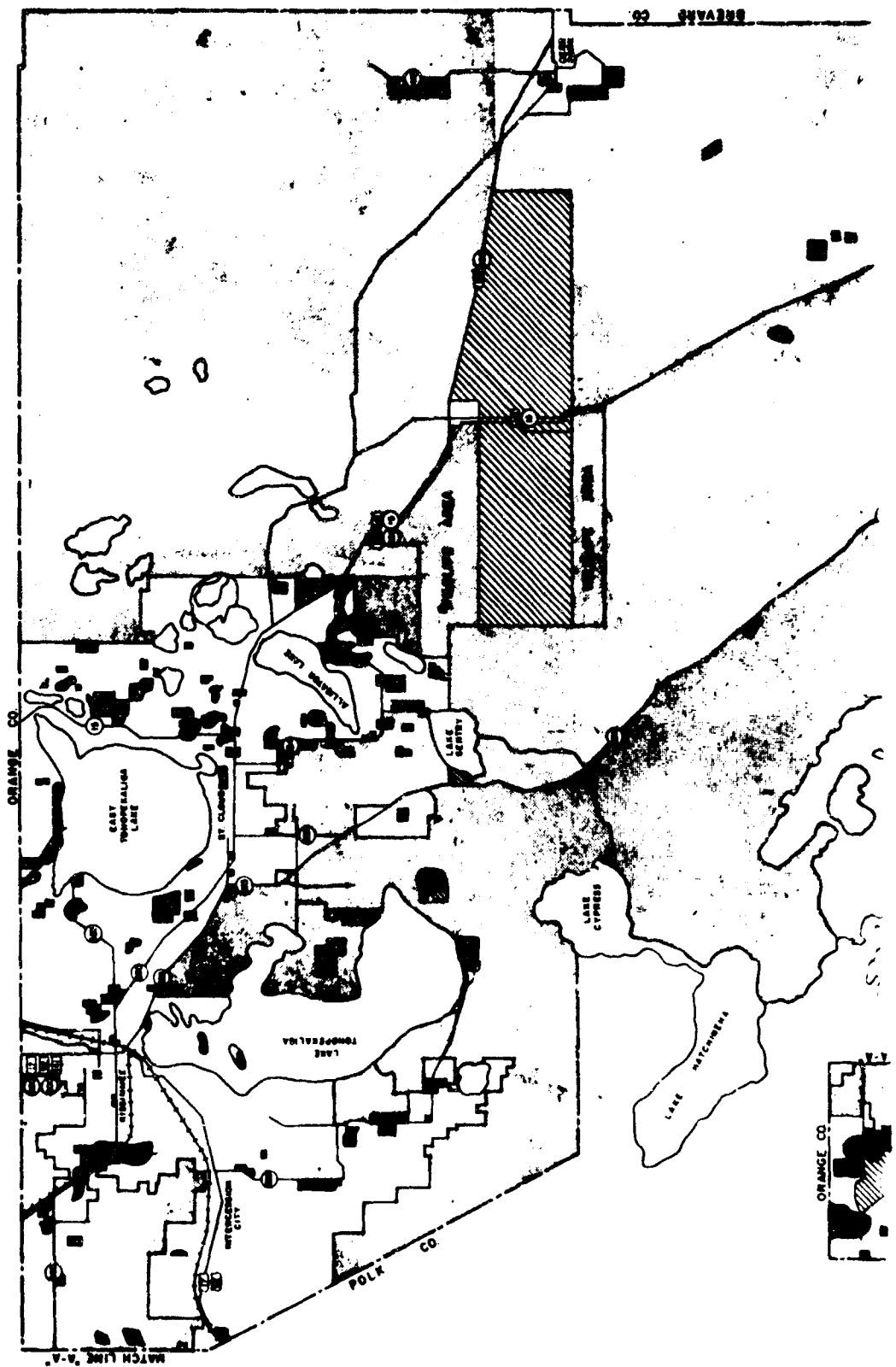
LIVESTOCK AND POULTRY CENSUS FOR OSCEOLA COUNTY1959⁽¹⁾ and 1962⁽²⁾

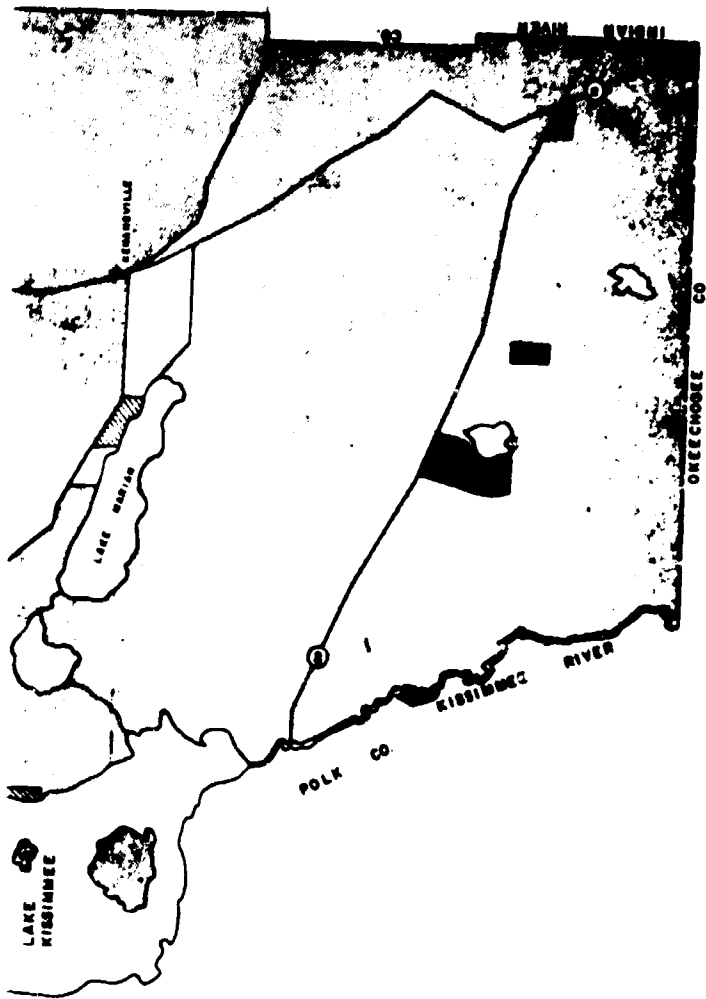
	<u>1959</u>	<u>1962*</u>
Beef Cattle and Calves	77,043	85,500
Milk Cows	1,021	1,154
Horses and Mules	584	800
Hogs and Pigs	253	200
Sheep and Lambs	482	500
Total Livestock in County	89,383	87,000
Chickens (4 months or older)	29,300	35,000

*Estimated as of January 1963

(1) Source: U.S. Agricultural Census - 1960

(2) Estimated by County Agricultural Agent





OSCEOLA COUNTY



LEGEND

- PRODUCING CITRUS ACREAGE
- FUTURE CITRUS ACREAGE OR YOUNG NON-PRODUCING GROVE OR NON-BEARING CITRUS ACREAGE
- VEGETABLE ACREAGE
- PASTURE LAND
- PERMANENT TYPE PASTURE LAND

GENERAL LAND USE IN SEMINOLE COUNTY1959⁽¹⁾ and 1962⁽²⁾

	<u>1959</u>	<u>1962*</u>
Total Land Area in County, Square Miles	321	321
Total Land in County, Acres	205,440	205,440
Cropland Harvested, Acres	23,090	26,875
Citrus ⁽³⁾		
Acres	17,000	20,600
Number of Trees	1,105,000	1,339,000
Hay		
Acres	810	1,000
Vegetables, Acres ⁽⁴⁾	5,280	5,275
Cabbage, Acres	2,000	1,950
Peppers, Acres	375	375
Beans, Acres	500	500
Sweet Corn, Acres	300	250
Celery, Acres	1,080	1,000
Lettuce and Leaf Crops, Acres	225	250
Misc: Truck Crops (Squash, Eggplant, Cauliflower)	405	525
Misc: Truck Flowers and Bulbs, Acres . .	395	425
Cropland Not Harvested and Not Pastured, Acres	4,558	4,000
Cropland, Total Acres	27,648	30,875
Cropland Used Only for Pasture, Acres	8,202	8,000
Woodland Pasture, Acres	83,891	85,000
Improved Pasture, Acres	21,500	21,060
Other Pasture, Acres	38,799	35,000
Total Pasture, Acres	152,392	149,060
Woodland Not Pasture, Acres	16,005	15,000
Other Land (Lakes, Rivers, Roads, House Lots, Wastelands, etc.)	9,395	10,505

*Estimated as of January 1963

(1) Source: U.S. Agricultural Census-1960. (2) Estimated by County Agricultural Agent. (3) "Census does not report all county citrus, since over 100 growers live in other counties." We have two other sources of data--all show more than census reports. (4) Census figures too high due

LIVESTOCK AND POULTRY CENSUS FOR SEMINOLE COUNTY

1959⁽¹⁾ and 1962⁽²⁾

	<u>1959</u>	<u>1962*</u>
(3) Beef Cattle and Calves	13,000	12,500
(4) Milk Cows	1,600	2,000
Horses and Mules	166	200
Hogs and Pigs	265	400
Sheep and Lambs	Less 25	Less 25
Total Livestock in County	15,056	15,125
Chickens (4 months or older)	69,705	65,000

*Established as of January, 1963

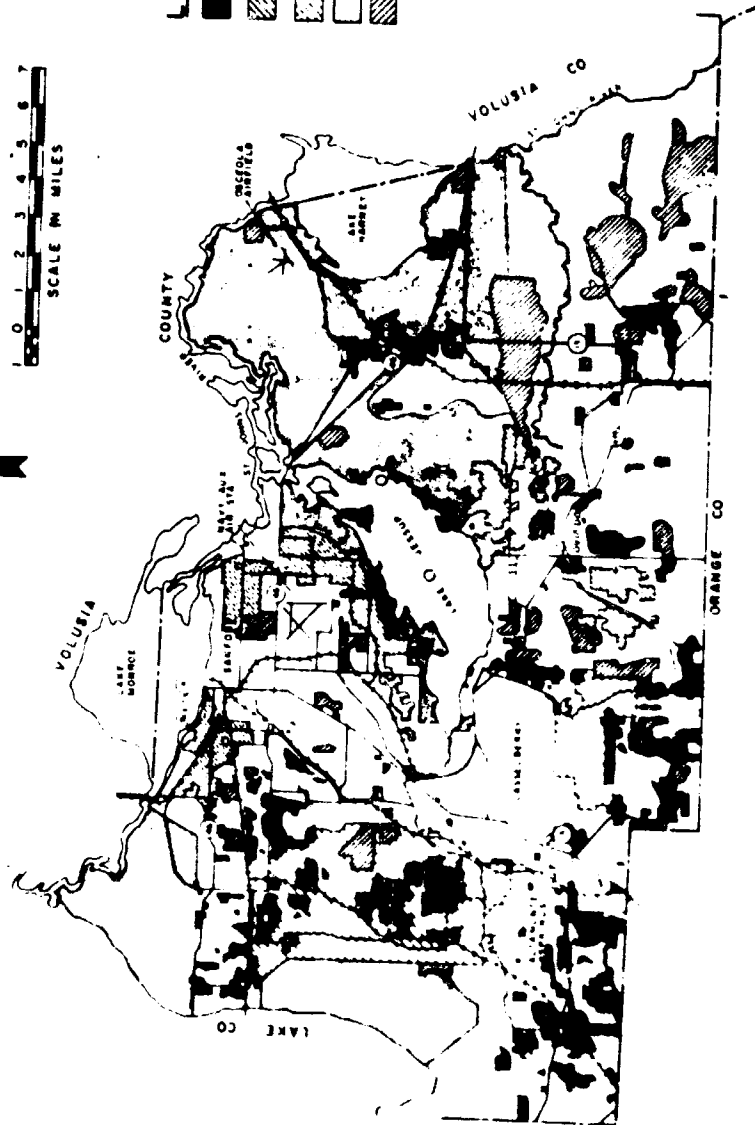
(1) Source: U.S. Agricultural Census - 1960

(2) Estimates by County Agricultural Agent

(3) Census figures too high -- census reported cattle owned by Seminole cattlemen, but the cattle actually are in adjoining counties.

(4) Census figures in error -- reports only three dairies and there are six. The figure reported is an estimate.

0 1 2 3 4 5 6 7
SCALE IN MILES



LEGEND:

- PRODUCING CITRUS ACREAGE
- FUTURE CITRUS ACREAGE OR YOUNG NON-PRODUCING GROVE OR NON-BEARING CITRUS ACREAGE
- VEGETABLE ACREAGE
- PASTURE LAND
- PERMANENT TYPE PASTURE LAND

SEMINOLE COUNTY

GENERAL LAND USE IN VOLUSIA COUNTY1959⁽¹⁾ and 1962⁽²⁾

	<u>1959</u>	<u>1962*</u>
Total Land Area in County, Square Miles	1,115	1,115
Total Land Area in County, Acres	713,600	713,600
Cropland Harvested, Acres	13,358	15,598
Citrus		
Acres	12,368	12,368
Number of Trees	803,920	803,920
Hay		
Acres	390	390
Vegetables, Acres	600	600
Tomatoes, Acres		20
Melons, Acres		300
Beans, Acres		10
Celery, Lettuce, and Peppers, Acres .		10
Misc: Truck Flowers and Bulbs		1,900
Cropland Not Harvested and Not Pastured, Acres	5,644	5,644
Cropland, Total Acres	19,002	21,242
Cropland Used Only for Pasture, Acres	12,803	11,803
Woodland Pasture, Acres	92,581	92,581
Improved Pasture, Acres	13,000	14,000
Other Pasture, Acres	34,935	34,925
Total Pasture, Acres	153,319	153,309
Woodland Not Pasture, Acres	47,162	47,162
Other Land (Lakes, Roads, Rivers, House Lots, Wastelands, etc.)	494,117	491,887

*Estimated as of January 1963

(1) Source: U.S. Agricultural Census - 1960

(2) Estimated by County Agricultural Agent

LIVESTOCK AND POULTRY CENSUS FOR VOLUSIA COUNTY

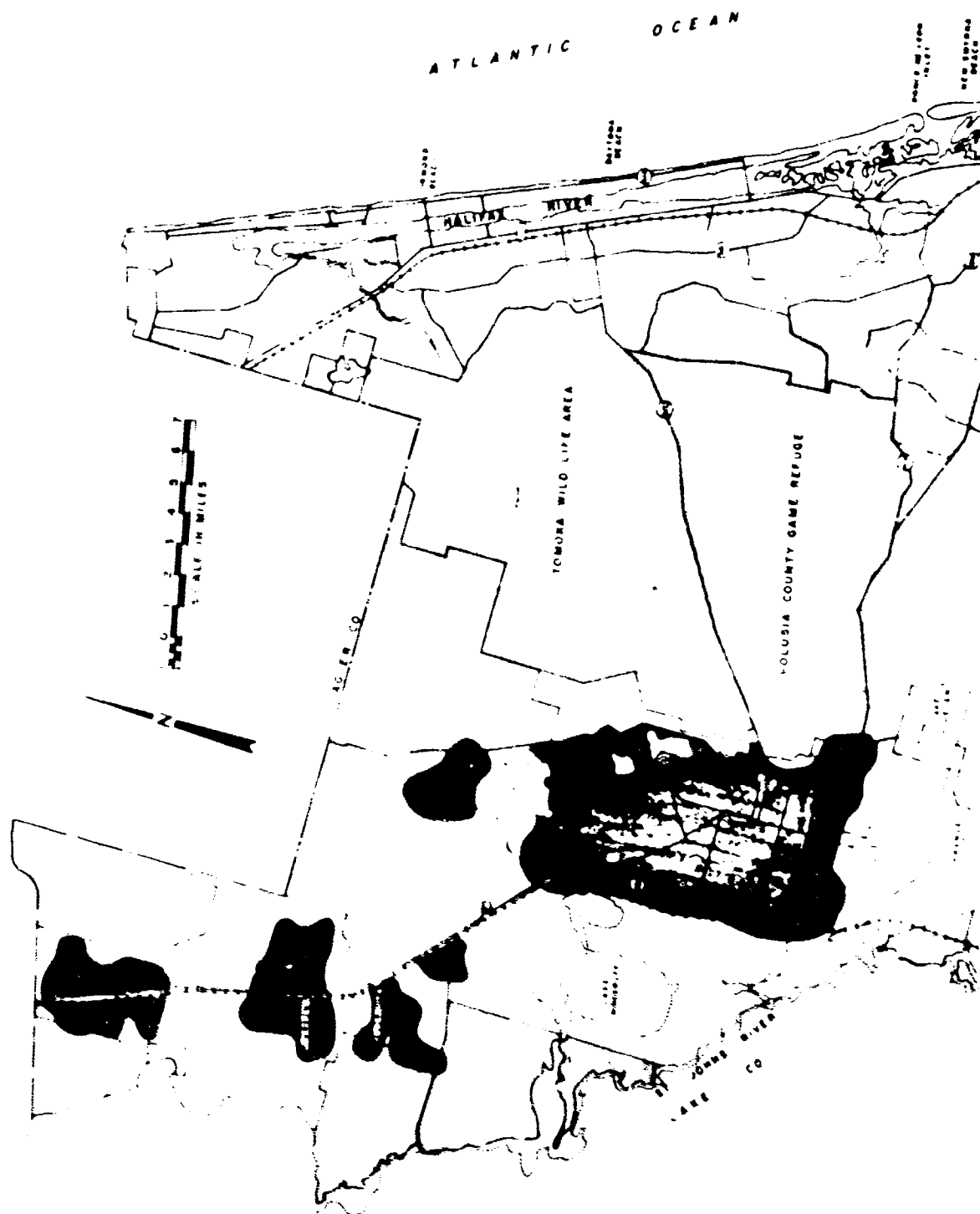
1959⁽¹⁾ and 1962⁽²⁾

	<u>1959</u>	<u>1962*</u>
Beef Cattle and Calves	19,494	22,000
Milk Cows	1,570	2,300
Horses and Mules	88	400
Hogs and Pigs	40	2,000
Sheep and Lambs		
Total Livestock in County	21,192	26,700
Chickens (4 months or older)	107,810	230,000

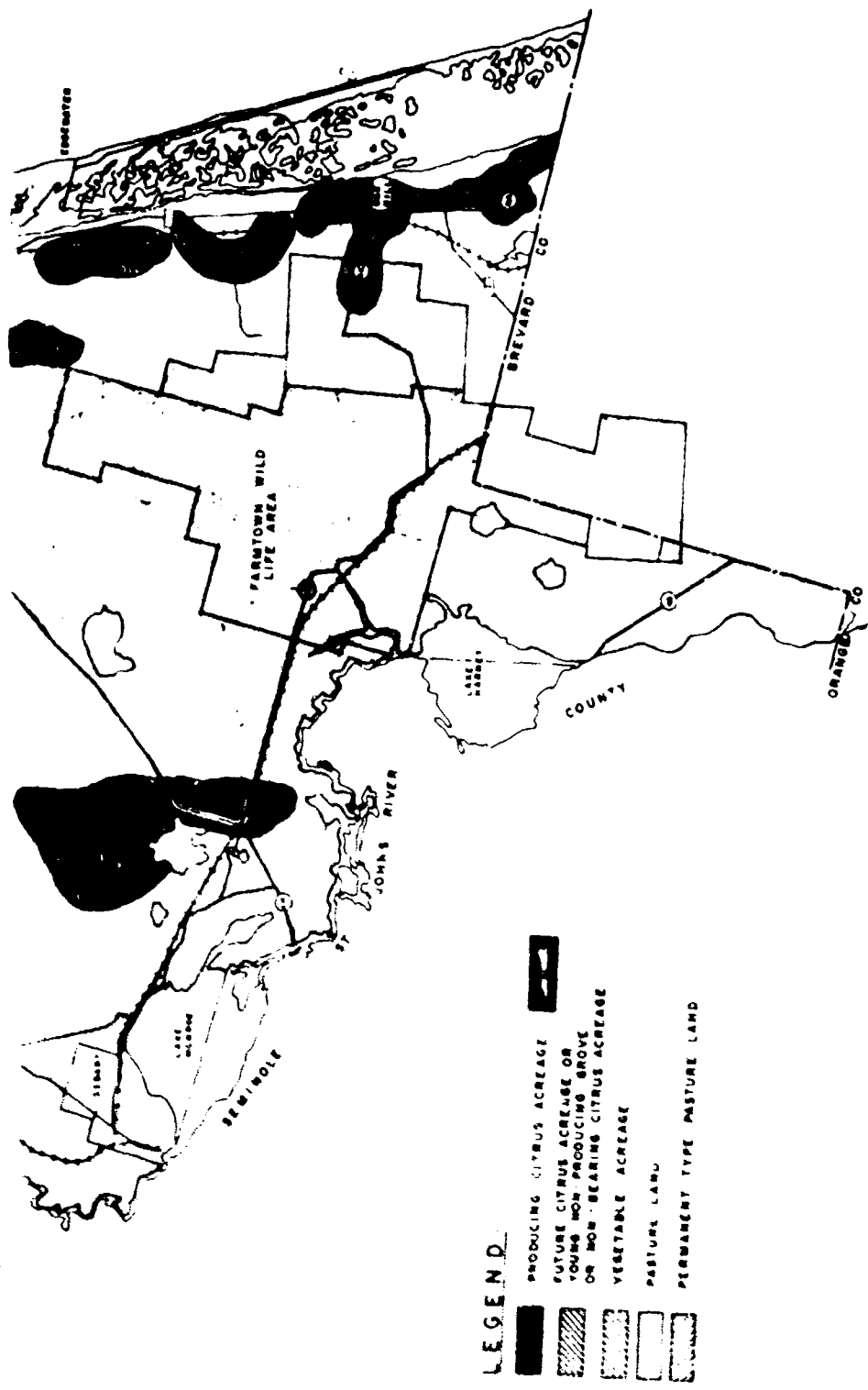
*Estimated as of January 1963

(1) Source: U. S. Agricultural Census - 1960

(2) Estimates by County Agricultural Agent



VOLUSIA COUNTY



TOTAL NUMBER OF LIVESTOCK IN SIX COUNTY AREA

1959(1) - 1962(2)

<u>County</u>	<u>Beef Cattle and Calves</u>	<u>Milk Cows</u>		<u>Horses & Mules</u>		<u>Hogs & Pigs</u>		<u>Sheep & Lambs</u>	
		<u>1959</u>	<u>1962</u>	<u>1959</u>	<u>1962</u>	<u>1959</u>	<u>1962</u>	<u>1959</u>	<u>1962</u>
		<u>Total Number</u>							
Freward		20,709	45,000	464	464	229	500	223	223
Indian River		16,861	20,000	1,775	1,900	193	180	339	74
Orange		26,383	23,000	6,927	7,000	323	500	410	50
Osceola		87,043	87,500	1,021	1,154	584	800	253	482
Seminole		13,000	12,500	1,600	2,000	166	200	265	25
Volusia		19,494	22,000	1,570	2,300	88	400	40	2,000
Totals:		183,490	208,000	13,357	14,818	1,583	2,580	1,530	3,762
								631	649

(1) U. S. Agricultural Census - 1960.

(2) Estimated by County Agricultural Agent.

III-44

SUMMARY OF ACREAGE IN VEGETABLE CROPS

SIX COUNTY AREA

1962*

<u>Commodity</u>	<u>Acres</u>
Citrus	185,000
Vegetables	20,000
Corn	6,300
Beans	3,200
Cabbage	2,500
Celery	2,200
Tomatoes	2,100
Escaroles	1,300
Peppers & Misc. Veg. Crops	1,000
Sugar Cane	12,000
TOTAL:	217,000

*As estimated by County Agricultural Agents

AGRICULTURE: FARM LAND ACREAGE

- 1959 -

<u>County</u>	<u>Approximate Land Area (In thousands of acres)</u>	<u>Land in Farms (In thousands of acres)</u>	<u>Proportion of Land in Farms</u>	<u>Land in Commercial Farms (In thousands of acres)</u>	<u>Proportion Of Farm Land In Commercial Farms</u>
Brevard	660	264	40.0		
Indian River	327	198	60.5	192	97.0
Orange	586	349	59.5	338	96.8
Osceola	848	815	96.1	799	98.0
Seminole	205	201	98.0	198	93.8
Volusia	714	263	36.8	231	87.8

Source: U.S. Bureau of Census, U.S. Census of Agriculture, 1959, Vol. 1, Part 29, Florida.

AGRICULTURE: VALUE OF FARM PRODUCTS

County	All Livestock & Livestock Products Sold (1959)				(Value Figure in Thousands)*			All Crops Sold (1959)			
	Value of Livestock & Dairy Products		Value of Livestock & Poultry Products		Total All Crops		Per Cent Change in Value 1954-59	Value of Field Crops ²	Value of Vegetables & Nuts	Value of Fruits	Value of Horticultural Specialties
	Products	Products ¹	Products	Products	Value	1954-59					
Brevard	135	778	130		6,994	74.4			4	6,823	168
Indian River	525	834	58		9,118	53.3	881		27	7,864	346
Orange	3,355	1,627	582		68,867	99.6	10		2,837	57,417	8,603
Osceola	372	2,909	154		4,289	132.3	15		51	3,953	207
Seminole	428	965	276		9,005	42.0	26		3,232	4,389	1,358
Volusia	639	1,184	851		6,496	13.0	29		125	4,216	2,127

*Source: U.S. Bureau of Census, U.S. Census of Agriculture, 1959, Vol. 1, Counties, Part 29, Florida

(1) Other than dairy and poultry products.

(2) Other than vegetables, fruits, and nuts.

III-47

NUMBER OF COMMERCIAL CITRUS TREES

1957 and 1962

County	(Number of Trees in Thousands)					
	All Oranges 1957	All Oranges 1962	All Grapefruit 1957	All Grapefruit 1962	Hybrids 1957	Hybrids 1962
Brevard	736	1054	305	345	71	107
Indian River	431	627	756	937	72	101
Orange	4232	4014	322	234	616	565
Osceola	740	1222	56	47	85	82
Seminole	280	1252	83	47	133	145
Volusia	275	930	67	41	134	125
Totals	7902	9050	1589	1651	1111	1125
					67	36
						10,669
						11,873

Source: Florida Crop and Livestock Reporting Service, U. S. Department of Agriculture, 1222 Woodward St., Orlando, Florida.

III-48

FORESTRY ACREAGE

Impact Area

November 1961

Counties	Commercial Forest Land Acres, 1959	Timber Stands 000's Cords, 1959	Pulpwood Cut, Cords 1959	No. of Seed- lings Planted by Counties, 1960-61
Brevard	211,100	1,247	13,439	56,500
Indian River	105,300	582	156	3,650
Orange	307,700	1,985	5,508	452,875
Osceola	461,700	1,868	16,441	77,000
Seminole	108,600	1,840	12,392	39,650
Volusia	416,000	3,244	53,075	3,236,338
Totals	1,610,400	11,466	101,011	3,866,013

Source: Florida Agricultural Annual Statistical Summary, 1960-61 Season;
Department of Agriculture.

BREVARD COUNTY DAIRY FARMS

As of January 1963

Name of Dairy and Location	Size of Dairy Farm	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Brantley's Dairy (6 mi. W. of Eau Gallie) Mr. M. Brantley, Mgr.	240 116 6,000	(1) (2) (3)	X	Dairy feeds and roughage feed	Deep Well	Foremost Dairy (Daytona Beach)
Sharpe's Dairy LaGrange Section, Dairy Rd., Titusville Mr. H. M. Sharpe, Mgr.	157-1/2 40 3,300	(1) (2) (3)	X	Dry hay and pasture	Deep Well	"
Wilbro Dairy (15 mi. SW of Melbourne) Mr. N. K. Williams, Mgr.	200 78 7,000	(1) (2) (3)	X	Pasture & Grain	Deep Well	"

(1) Acres

(2) Head

(3) Average production per month in gallons

INDIAN RIVER COUNTY DAIRY FARMS

As of January 1963

Name of Dairy and Location	Size of Dairy Farm	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Arrow D. Dairy W. Wabasso Road (5 mi. W. of Rt. 1) Mr. D. W. Hinkle, Mgr.	160(1) 600-700(2) 21,900(3)	X		Pasture, materials from own feed mill	Deep Well	Land of Sun Dairy (Miami)
Jack Davis W. Wabasso on Fellsmere Rd. Mr. J. Davis, Mgr.	160(1) 500(2) 28,000(3)	X		Pasture & supple- mentary feeding	Deep Well	Independent: Farmers, Miami (Home Milk)
Echo Hill Dairy Junction of Rt. 510 & 512 Mr. D. Hinckle, Mgr.	160(1) 300(2) 21,750(3)	X		Pasture, materials from own feed mill	Deep Well	Land of Sun Dairy (Miami)
Fellsmere Dairy E. of Fellsmere on Rt. 512 Mr. P. C. Nedell, Mgr.	280(1) 186(2) 13,500(3)	X	X	Pasture, citrus pulp, & grain	Deep Well Shallow Well	Tripson Dairy
Joe-Bar Dairy Emerson Ave. at County Line Mr. J. W. Danson, Mgr.	160(1) 450(2) 30,000(3)	X	X	Pasture & supple- mentary feeding	Shallow Well	Tripson Dairy
Joe-Bar Farms, Inc. Emerson & So. County Line Mr. J. W. Danson, Mgr.	300(1) 350(2) 31,800(3)	X		Pasture & supple- mentary feeding	Shallow Well	Tripson Dairy

INDIAN RIVER COUNTY DAIRY FARMS (Cont'd)

<u>Name of Dairy and Location</u>	<u>Size of Dairy Farm</u>	<u>Replacements</u>		<u>Feeding Practices</u>	<u>Water Supply</u>	<u>Distribution of Dairy Product</u>
		<u>From Outside Agencies</u>	<u>From Own Farm</u>			
Tripson Dairy Rosedale Road Vero Beach Mr. J. R. Tripson Manager	10(1) (None) Plant (2) 100,000(3) (Processed)				Deep Well Shallow Well	Stuart, Fla., to Melbourne, Fla.

(1) Acres

(2) Head

(3) Average production per month in gallons

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ORANGE COUNTY DAIRY FARMS

As of January 1963

Name of Dairy and Location	Size of Dairy Farm	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Anderson Dairy (10 mi. S. of Winter Garden) Mr. H. Anderson, Mgr.	100(1) 40(2) 3,900(3)		X	Pasture & Dry Feed	Deep Well	Borden's
Arndt Dairy SW of Union Park Mr. W. Arndt, Mgr.	220(1) 160(2) 14,700(3)		X	Green-chop pasture & Dry Feed	Deep Well	T. G. Lee
Ira Barrow Dairy (1-1/2 mi. S of Lockwood, E on Rt. #50) Mr. Ira Barrow, Mgr.	610(1) 175(2) 14,400(3)		X	Pasture, Ensilage, and Dry Feed	Deep Well	Borden's
Brockbank Dairy (1 mi. W of Pinecastle) Mr. B.A. Brockbank, Mgr.	150(1) 215(2) 24,000(3)	X	X	Dry Feed, Pasture	Shallow Well	T. G. Lee
Cloyd's Dairy Dean Road (4 mi. S of Union Park) Mr. J. Cloyd, Mgr.	700(1) 200(2) 9,000(3)		X	Pasture, Dry Feed	Deep Well	Borden's

ORANGE COUNTY DAIRY FARMS (Cont'd)

Name of Dairy and Location	Size of Dairy Farm	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Collins Dairy Curryford Road (SE of Orlando) Mr. H. Collins, Mgr.	165(1) 200(2) 21,900(3)		X	Ensilage, Green- chop, Pasture & Dry Feed	Deep Well	T. G. Lee
Eunice Dairy Fairvilla & Shoder Rds. Mr. B. M. Eunice, Mgr.	560(1) 260(2) 22,500(3)		X	Pasture & Dry Feed	Deep Well	Borden's
Farm Brook Dairy Conway Area, SE of Orlando Mr. T. Farmer, Mgr.	160(1) 180(2) 15,000(3)	X		Pasture	Deep Well	Foremost (Daytona Beach)
Fennel Dairy Eatonville Mr. O. Fennel, Mgr.	55(1) 120(2) 4,800(3)		X	Pasture & Dry Feed	Deep Well	Borden's
Good Luck Dairy SE of Conway (Near McCoy) Mr. B. W. Judge, Jr., Mgr.	500(1) 260(2) 27,000(3)		X	Dry & Green Chop Hay	Deep Well	Perfection & T.G. Lee
Hall's Dairy S of McCoy AFB Wetherbee Road Mr. K. Hall, Mgr.	70(2) 8,400(3)		X	Dry Feed, Pasture	Deep Well	T.G. Lee

ORANGE COUNTY DAIRY FARMS (Cont'd)

Name of Dairy and Location	Size of Dairy Farm	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Hiatt Dairy (1 mi. E of Bithlo) Mr. L. Hiatt, Mgr.	200(1) 180(2) 17,400(3)	X	X	Dry Feed, Hydro- ponic Green Feed	Deep Well	Perfection Dairy
Jersey Jug Hwy. 44 Mr. G. Baumeister, Mgr.	100(1) 140(2) 16,500(3)		X	Dry, Green Chop No Pasture	Deep Well	Jersey Jug
Kirton Dairy Redditt Rd, SE of Orlando Mr. D. O. Kirton, Mgr.	335(1) 215(2) 16,500(3)	X	X	Pasture	Deep Well	Borden's
Lay Laine E. of Winter Park Mr. C. Ward, Jr., Mgr.	620(1) 160(2) 14,400(3)		X	Pasture & Dry Feed	Deep Well	T. G. Lee
T. G. Lee #1 SE of Conway (Near M. Coy) Mr. Robinson, Mgr.	700(1) 690(2) 63,000(3)	X	X	Green Chop & Dry Ensilage	Deep Well	T. G. Lee, Inc.
T. G. Lee #2 SE of Conway (Near McCoy) Mr. Morrow, Mgr.	1,400(1) 375(2) 30,000(3)		X	Pasture, Dry Ensilage	Deep Well	T. G. Lee, Inc.
Alex Mole Dairy Boggs Creek Road S of McCoy Mr. A. Mole, Mgr.	90(1) 60(2) 4,950(3)		X	Pasture & Dry Feed	Deep Well	Borden's

ORANGE COUNTY DAIRY FARMS (Cont'd)

Name of Dairy and Location	Size of Dairy Farm	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Oak Lawn Dairy S. Orange Blossom Rd. and Sand Lake Road Mr. A. Hammond, Mgr.	160(1) 260(2) 28,800(3)		X	Pasture & Dry Feed	Deep Well	Borden's
Paterson Dairy (10 mi. S of Winter Garden) Mr. K. Paterson, Mgr.	200(1) 50(2) 4,800(3)		X	Pasture & Dry Feed	Deep Well	T.G. Lee, Inc.
Platt Dairy (1 1/2 mi. S of Bithlo) Mr. Donald Platt, Mgr.	110(1) 130(2) 11,100(3)		X	Pasture, Dry Feed, Ensilage, Green Chop	Deep Well	T.G. Lee
Raper #1 Curryford Road (N. of Orlando) Mr. C. Farless, Mgr.	500(1) 300(2) 18,000(3)	X		Pasture, Dry Feed	Deep Well	T.G. Lee
Tarte Dairy Plymouth Mr. M. Tarte, Mgr.	200(1) 120(2) 11,400(3)		X	Ensilage & Dry Feed	Deep Well	Borden's

(1) Acres

(2) Head

(3) Average production per month in gallons

III-52

OSCEOLA COUNTY DAIRY FARMS

As of January 1963

Name of Dairy and Location	Size of Dairy Farms	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Bass Dairy (6 mi. NE of Kissimmee on Boggy Creek Road) Mr. C. Bass & Sons, Mgr.	320(1) 129(2) 9-10,000(3)		X	Pasture	Deep Well	T. G. Lee (Orlando)
Du-Drop Dairy (2 mi. W. of Kissimmee on Shingle Creek Road) Mr. T. Edge, Mgr.	150(1) 80-100(2) 7-8,000(3)	X	X	Pasture, Grain, & Green Chop	Deep Well	Borden's (Orlando)
A. L. Hammond Dairy Campbell Station Mr. A. L. Hammond, Mgr.	300(1) 225(2) 15,000(3)	X	X	Pasture	Deep Well Artesian	Borden's (Orlando)
Hi-Mark Dairy (4-1/2 mi. E of Kissimmee at Partin Settlement) Mr. J. J. Johnson, Mgr.	120(1) 100(2) 8,000(3)	X	X	Pasture	Deep Well	Perfection (Orlando)
L. and M. Dairy Brown Chapel Rd. St. Cloud Mr. C. J. Lakeland, Mgr.	200(1) 275(2) 6,000(3)	X		20% Dairy Rations & Mixed Roughage	Deep Wells (3)	T. G. Lee (Orlando)

OSCEOLA COUNTY DAIRY FARMS (Cont'd)

Name of Dairy and Location	Size of Dairy Farms	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Nell's Dairy (10 mi. E of Kissimmee on Hwy. 530) Mr. F. Austin, Mgr.	120(1) 150(2) 12,000(3)		X	Pasture	Deep Well	T. G. Lee (Orlando)
Suhl's Dairy (3 mi. SW of Kissimmee on Air Port Road) Mr. R. Suhl, Mgr.	245(1) 100-200(2) 9-10,000(3)	X	X	Grain, Green Chop, and Pasture	Deep Well	Boruen's (Orlando)

(1) Acres

(2) Head

(3) Average production per month in gallons

III-53

SEMINOLE COUNTY DAIRY FARMS

As of January 1963

Name of Dairy and Location	Size of Dairy Farm	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Cammack Dairy Mr. E. Cammack Manager	240(1) 255(2) 25,500(3)		X	Pasture, Silage, & Purchase	Deep Well	T.G. Lee Dairy (Orlando)
Eldridge Dairy (So. of Oviedo) So. Seminole Co. Mr. J. P. Eldridge, Mgr.	250(1) 203(2) 7,800(3)	X		Pasture & Purchase	Deep Well	Perfection Dairy (Orlando)
Green Valley Dairy (So. of Sanford) Seminole County Mr. J. B. Baker, Mgr.	260(1) 400(2) 36,000(3)	X	X	Pasture, Silage, & Purchase	Deep Well	Perfection Dairy (Orlando)
Harden #2 Dairy Sanford Mr. G.S. Harden, Mgr.	350(1) 408(2) 35,000(3)	X	X	Pasture & Purchase	Deep Well	Perfection Dairy (Orlando)
Raper #2 Dairy (Near Goldenrod) So. Seminole Co. Mr. E. C. Farless, Mgr.	280(1) 260(2) 23,000(3)	X	X	Pasture & Purchase	Deep Well	T.G. Lee Dairy (Orlando)
Whilden Dairy (Near Forest City) So. Seminole Co. Mr. E.M. Whilden, Mgr.	100(1) 50(2) 3,000(3)		X	Pasture & Purchase	Deep Well	Borden's Dairy

(1) Acres (2) Head (3) Cows

VOLUSIA COUNTY DAIRY FARMS

As of January 1963

Name of Dairy and Location	Size of Dairy Farm	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Afton Acres Dairy DeLand Mr. H. Wilson, Mgr.	80(1) 26(2) 2,400(3)		X	20% Dairy Ration & Mixed Roughage	Deep Well	Wallace Dairy(New Smyrna) Castle Dairy (Holly Hill)
Barrows Dairy (3 mi. W. of Port Orange City on Herbert St.) Mr. W. R. Barrows, Mgr.	160(1) 175(2) 17,200(3)	X	X	Citrus Pulp & con- centrates, Purchase & Pasture	Deep Wells (2)	Borden's (Orlando)
Beacon Dairy Near DeLand School Mr. H. Jacobs, Mgr.	750(1) 285(2)		X	Dry Citrus Pulp, & Balanced Milk Ration		Velda Dairy (Winter Haven)
Beville Dairy So. Daytona Mr. R. Beville, Mgr.	200(1) 144(2) 15,000(3)		X	Citrus Pulp & Mixed Feed	Deep Well	T. G. Lee (Orlando)
Blowers Dairy DeLand Mr. H. Blowers, Mgr.	175(1) 275(2) 24,000(3)	X	X	Citrus Pulp & Cow Ration	Deep Well	T. G. Lee (Orlando)
Castle Dairies, Inc. Holly Hill Mr. H. Ranze, Mgr.	28(1) 96(2) 6,000(3)	X		Citrus Pulp, Georgia Hay, Dairy Ration	Deep Well	Castle Dairies, Inc.

III-54

VOLUSIA COUNTY DAIRY FARMS (Cont'd)

Name of Dairy and Location	Size of Dairy Farm	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Cressko Dairy Barbersville Mr. F. Cresskowski, Mgr.	132(1) 52(2) 5,600(3)		X	Citrus Pulp & Cow Ration	Deep Well	Foremost Dairy
Foremost Dairy Daytona Beach Mr. G. Roberts, Mgr.				*Equipment	Municipal Supply	Daytona Beach, Orlando, Titusville, Brevard Co.
Kirton Dairy Rt. #1 Daytona Beach Mr. M. Kirton, Mgr.	680(1) 325(2) 24,000(3)	X	X	20% Dairy Ration Mixed roughage	Deep Wells (2)	Borden's (Orlando)
New York Dairy Sansula Airport Rd. Mr. D. Madoras, Mgr.	125(1) 129(2) 10,500(3)	X		80% Mfg. Roughage & 20% Dairy Ration	Deep Well	Borden's (Orlando)
St. Johns Dairy Spring Garden Dr. Stoudemide, Mgr.	200(1) 76(2) 6,000(3)	X	X	Citrus Pulp & Dairy Ration	Deep Well	T. G. Lee (Orlando)
Sixma Dairy Lake Hellen Mr. J. Sixma, Mgr.	300(1) 60(2) 4,800(3)		X	Citrus Pulp & Dairy Ration	Deep Well	DeLand Area

VOLUSIA COUNTY DAIRY FARMS (Cont'd)

Name of Dairy and Location	Size of Dairy Farm	Replacements		Feeding Practices	Water Supply	Distribution of Dairy Product
		From Outside Agencies	From Own Farm			
Su-Jen Dairy Mr. E. Miller Manager	100(1) 139(2) 13,500(3)		X	Citrus Pulp & 20% Ration	Deep Well	T. G. Lee (Orlando)
Sunny Hill South, Inc. DeLeon Springs Mr. F. White, Mgr.	500(1) 800(2) 82,500(3)	X	X	Citrus Pulp, Corn Silage, 20% Ration	Deep Wells (2)	Borden's (Orlando)
Wallace Dairy Wallace Rd. New Smyrna Mr. C. Wallace, Mgr.	45(1) 60(2) 4,800(3)	X	X	Roughage Mix, Pasture, & Cow Feed	Deep Well	Stores on Rt. 44, New Smyrna, and Edgewater, Fla.
Zimmerman Dairy Daytona Beach	200(1) 52(2) 6,900(3)		X	Pulp Roughage Mixed, 20% Dairy Ration	Deep Well	T. G. Lee (Orlando)
*Equipment: Refrigeration HTST Milk (all controls) - 800 gallons HTST Mix (all controls) - 600 gallons Generator Raw Milk Storage, 9000 gallons Pasteurized Milk Storage 3500 gallons Bulk Dispenser 75/minute						
		(1) Acres				
		(2) Head				
		(3) Average production per month in gallons				
		123				

DEPARTMENT OF AGRICULTURE
DIVISION OF ANIMAL INDUSTRY
Meat Inspection Section

SLAUGHTERING AND PROCESSING ESTABLISHMENTS UNDER
THE SUPERVISION OF THE DIVISION OF ANIMAL INDUSTRY

January 1963

<u>Est. No.</u>	<u>Name and Address</u>
61	Armour & Co., P. O. Box 272, Orlando
320	Central Portion-Pak, Inc., 1829 Tallokas St., Orlando
337	City Provisioners, 330 North St., Daytona Beach
203	Dominik's Sausage Shop, 230 N. Highway 17-92, Casselberry
270	Felix Specials, P. O. Box 121, Orange City
285	Gertner Meat Packers, Inc., P. O. Box 8307, Orlando
240	R. J. Herthneck & Co., 2139 W. Central Ave., Orlando
37*	Hi-Flavor Meats, Inc., Box 1025, Oviedo
5-C	Lykes Brothers, Inc., P. O. Box 547, Orlando
275	Miller Meat Co., 4433 Edgewater Dr., Orlando
282	Rich Plan of Orlando, Inc., 401 W. 13th St., Sanford
79*	Roberson Packing Co., Rt. 1, Winter Garden
292	Schmutzer Meat Center, 219 Virginia Ave., Orlando
266	Sunnyland of Orlando, P. O. Box 6071-B, Orlando
274	Swift & Co., 405 27th St., Orlando
286	Tastee Food Service, 2705 E. South St., Orlando

<u>Est. No.</u>	<u>Name and Address</u>
336	Tastee Meat Market, 2300 Conway Rd., Orlando
23	Turner & Gee, P. O. Box 100, Orlando
59*	Turner & Gee, P. O. Box 100, Orlando
250	Wilson Bros., Bar-B-Q Sauce Co., Inc., 809 Pinehills Rd., Orlando
350	Bell Food Co., 298 W. Comstock Ave., Winter Park

*Denotes Slaughter Establishments

BREVARD COUNTY FISH PROCESSING PLANTS

- January 1963 -

III-55

Name of Plant, Manager, and Location	# of em- ployees	Capacity of Plant	Obtainment of Raw Products	Months of Oper- ation	Distribution of Product
Hudgins Fish Co. Mr. J. E. Zegel U.S. #1, Grant	26	150 gal. shucked oysters/wk. 50 bu. shell stock/wk., and 1,000 lbs. crab meat/wk.	Approved Acres of Indian River	Crabs=12 Oysters=7	Locally (primarily W. Palm Beach)
Haywood's Crab House Mr. D. Haywood U.S. #1, Grant	8	1,300 lbs. crab meat/wk.	Indian River & Indian River Lagoon	12	Interstate
Island Crab Mr. E. Griffiths So. Banana River Drive	20	2,500 lbs. /day	Indian River, Banana River & Atlantic Ocean	12	Interstate
Bucural Crab Plant Mr. A. Bucural, Sr. N. Merritt Island, off of Rt. #406	5	200-300 lbs. crab meat/wk.	Indian River	12	Volusia County, Orange County & Brevard County
Fischers Sea Food Mr. L. Fischer Port Canaveral	15	40,000 lbs. fish and shrimp/day	Atlantic Ocean	12	Interstate
Hensel's Red Rooster Mr. R. F. Hensel Harbor City	25	119 seats	Wilson & Co. - meat, Daytona Cold Storage - fish & vegetables & Foremost Dairy	12	Local

BREVARD COUNTY FOOD PROCESSING PLANTS (Cont'd)

- January 1963 -

III-55

Name of Plant, Manager, and Location	# of em- ployees	Capacity of Plant	Obtainment of Raw Products	Months of oper- ation	Distribution of Product
Trade Winds Cafeteria Mr. N. Fisher Eau Gallie	50	Catering Service		12	Local
Tropicana Products, Inc. Mr. S. Freeman Port Canaveral	125	100,000 gal. citrus juice/wk.	Central Florida	10	Interstate & Canada
Brevard Fresh Juice Dist. Mr. O.S. McDougal Melbourne	2	200 gal. citrus juice/day	Citrus growers & shippers - central & local groves	9	Local

INDIAN RIVER COUNTY FOOD PROCESSING PLANTS

- January 1963 -

III-56

Name of Plant, Manager, and Location	# of em- ployees	Capacity of Plant	Obtainment of Raw Products	Months of Opera- tion	Distribu- tion of Product
Indian River Sea Food Mr. E. D. Baisden Sebastian Riverfront	Approx. 35-40	1,200 lbs. crab meat/day Undetermined as to oysters	Crab meat from Indian River, also off shore (shrimper's nets) Oysters from Brevard County	12	Inter- state
Stockwell Crab Meat, Inc., Mr. H. R. Stockwell 18th St. (at river) Vero Beach	25	1,000 lbs. /day	Indian River	12	Inter- state
Okeelanta Sugar Corp. Mr. J. LaTour 4 mi. west of Fellsmere	172	300,000 lbs. /day	Fields surrounding plant, 24,000 acres	8	Inter- state

ORANGE COUNTY FOOD PROCESSING PLANTS

- January 1963 -

III-57

Name of Plant, Manager, and Location	# of employees	Capacity of Plant	Obtainment of Raw Products	Months of operation	Distribution of Product
Al's Donut Mr. A. Kownacki So. Orange Blossom Trail, Orlando	2	200 dozen/day	Chapman Smith - Mix Chicago - Shortening - Armour and Swift	12	Orange County
Anchors Food, Inc. Mr. O. E. Smith Silver Star Road Orlando	10	24,000 lbs. of salads/day -- 1,600 lbs. barbecue/day	Vegetables & poultry - Winn-Dixie, Meat-Role Packers, Chicago, Oscar- Meyer, Wisconsin	12	Interstate
Bell Food Co. Mr. B. Bell W. Comstock Winter Park	2	Donuts 1/2 doz./pk., 5500/yr. 10 oz. pizza 50,000/yr.	Milk - Foremost, Meat - Turner & Gee Grocery	8	Intrastate
G & B Bakery Products Mr. G. Bloomberg N. Rio Grand Ave. Orlando	37	1,250 doz. Danish rolls/day--Turn- overs, 3,500/day Coffee cakes, 950/day	Milk - Borden's, Flour - Berger & Rachelson, Can Products - White Grocery	12	Intrastate
Greco's Golden Loaf Bakery Mr. M.A. Greco Orlando	15	900,000 loafs of bread/yr.	Flour - Inter. Flour Milling Co., Minn., Short- ening-Armour & Swift, Yeast - Budweiser	12	Intrastate

ORANGE COUNTY FOOD PROCESSING PLANTS (Cont'd)

- January 1963 -

III-57

Name of Plant, Manager, and Location	# of employees	Capacity of Plant	Obtainment of Raw Products	Months of operation	Distribution of Product
Hole-In-One Donut Co. Mr. B. J. Harwick Tucker Road Orlando	6	500-1000 lb. bag of mix/mo. 50 lb. bag 1,000/month	Milk - Armour & Co., Flour - Midas Mills & Pillsbury Mills	12	Intrastate
Industrial Center Mr. V. Wilkinson Old Cheney Highway Orlando	6	300 sandwiches, day - 40 salads/week	Bread - Ward Bakeries, Meat - Swift & Co., Milk - T.G. Lee Dairy, Economy Wholesale Can Goods	12	Orange County
Kwik Snack Mr. M. Schwenneker Magnolia Homer Rd. Orlando	9	175 sandwiches, day	Meretta Bread, Meat - Sunnyland Economy, Coffee - A & P	12	Orange County
Meals on Wheels Mr. H. Winslow W. Washington St. Orlando	7	125,000 meals, year	Meat - Hearthneck & Armour, Dandy Bread, Vegetables - Howard Pro- duce Plantation-Velda Milk	12	Orange County
Central Fla. Poultry Corp, Mr. W. Sterling Edgewater Dr., Orlando	33	Eggs canned, beaten & strained- 2,600 (30 lbs.) cans/year	Immediate six county area	12	Six County Impact Area
Mills' Seafood & Meats, Mr. R. Mills, Mills Rd., Lockhart	3	5,000 lbs. seafood, yr., 5,000 lbs. barbecue/year		10	Orange County
			130		

ORANGE COUNTY FOOD PROCESSING PLANTS (Cont'd)

- January 1963 -

III-57

Name of Plant, Manager, and Location	# of employees	Capacity of Plant	Obtainment of Raw Products	Months of Operation	Distribution of Product
Royalty Donut Shop Mr. F. A. Greene Dowd Avenue Orlando	2	1/2 and 1 dozen packages - new business (capacity not established)	Compact Donut Machine & Supply Co., Orlando	New Business	Orange County
Swedish Donut Shop Mr. L. W. Laird W. Fairbanks Orlando	6	260 dozen donuts/day	Shortening - Swift Co., White Sugar - White Grocery(Sanford), Mix - Chapman & Smith, Inc. (Melrose, Illinois)	12	Intrastate
Wilson Brothers Meat Packers Mr. W. H. Wilson W. Colonial, Orlando	4	2,500 gallons	Tomato sauce - Howards Grocery, Meat - Robertson Meat Packing, Sauce - Dixie Lily Milling Co., Sausage - Central Florida Counties	12	Central Florida

SEMINOLE COUNTY FOOD PROCESSING PLANTS

- January 1963 -

III-58

Name of Plant, Manager, and Location	# of employ- ees	Capacity of Plant	Obtainment of Raw Products	Months of Opera- tion	Distribution of Product
Widdis Rabbitery Mrs. B. Widdie Longwood, Lake Mary Road	2	5,200 rabbits annually		12	Orange and Seminole Counties
Hi-Acres Concentrate Inc. Mr. M. T. Sahina Forest City	100	3 million gallons of concentrate annually	Orange groves in Central Florida area	12	Interstate
Hi-Flavor Meats, Inc. Mr. J. Amadeo Oviedo	6	1 million lbs. annually	Local beef cattle ranches	12	Intrastate (Central Fla.)
Your Home Food Service, Inc., Mr. M. V. Parry W. 13th St., Sanford	6	10,000 lbs. annually	Local hog and beef farms	12	Intrastate (Central Fla.)
Yoo-Hoo Bottling Co. Mr. O.E. Fourakre Longwood	4	27,000 cases choco- late flavored bev- erage annually	Miami, Fla. (Home Office)	12	Intrastate (Central Fla.)
Florida Golden Do-Nut Shop, Mr. T. Morski Chuluota	2	300 bags of donuts/day	Orlando	12	Local
			132		

SEMINOLE COUNTY FOOD PROCESSING PLANTS (Cont'd)

- January 1963 -

III-58

Name of Plant, Manager, and Location	# of employees	Capacity of Plant	Obtainment of Raw Products	Months of Operation	Distribution of Product
Deep South Products, Inc., Mr. A. Rhoden Forest City	60	1/2 million lbs. of vinegar & salad oil annually. 4-5 million lbs. of peanut butter, mayonnaise, jellies, preserves, each annually	Eastern U.S.A.	12	Winn-Dixie Food Stores, S. E., U.S.A.
Lulu's Sandwich Shop Mr. G. F. Schunemann Sanford, Florida	3	300 sandwiches daily	Sanford and Orlando	12	Seminole and South Volusia Counties
Dominick's Sausage Co. Mr. D. Krasorec, Jr. Rt. 17-92, Casselberry	3	40,000 lbs. (annually) sausage, beef	Chicago and New York	12	Intrastate (Central Fla.)

VOLUSIA COUNTY FOOD PROCESSING PLANTS

- January 1963 -

III-59

Name of Plant, Manager, and Location	# of employees	Capacity of Plant	Obtainment of Raw Products	Months of Operation	Distribution of Product
Mofrite Company Mr. J. Wright & Mr. D. Mofford Daytona Beach	6	80,000 pizzas (varied)	Local merchants	12	East and central portion of Florida
Riverside Packing House, Mr. C. E. Zuber Allandale, Fla.	10	122,300 lbs./year (meat products)	State & local merchants	12	East and central portion of Fla.
Tropical Candy Co. Mrs. J. A. Williams Ormond Beach	4	30,000 lbs. salt water taffy	Local merchants	12	East and central portion of Fla.
Floreco Crab Co., Inc. Mr. E. P. Fuller Allandale, Fla.	11	100,000 lbs. crab meat - 35,000 lbs. canned crab meat	Local waters: Halifax and Indian River	12	Interstate
Southern Bakeries Co. Mr. H. H. Hutchenson Daytona Beach	53	2,658,240 lbs. bread 743,964 lbs. rolls	Open market (main company office)	12	East and central portion of Fla.
Park Provisions Mr. M. I. Kelly Daytona Beach	7	95,000 lbs. meat 5,000 lbs. seafood	Beef - veal from local companies; seafood - out of state companies	12	Central East Coast
			134		

VOLUSIA COUNTY FOOD PROCESSING PLANTS (Cont'd)

- January 1963 -

III-59

Name of Plant, Manager, and Location	# of employ- ees	Capacity of Plant	Obtainment of Raw Products	Months of oper- ation	Distribution of Product
Gentry's Fruit & Juice, Mr. C. C. Jacobs Daytona Beach	5	4,500 gal. sections and 35,000 gal. juice	Local groves	12	Local
Cherry's Bakery Mr. E. A. Jacoby Daytona Beach	7	100,000 donuts (1/2 doz. bags) 35,000 cuba stix (15 oz.)	Local	12	East central part of Fla.
Angell & Phelps Mr. & Mrs. E. W. Reisinger Daytona Beach	7	13,200 lbs. of candy	Local & non-local companies	12	Local
Mrs. Fair's Foods Mr. & Mrs. J. Fair DeLand Airport	3	200,000 lbs. blanched & 100,000 lbs. raw potatoes	Local & Open Market	12	Central & East Central Florida
C and P Foods Mr. C. P. Flores Daytona Beach	2	2,000 doz. sandwiches	Local	12	Local
Tropical Blossom Honey, Mr. & Mrs. D. McGinnis Edgewater	7	500,000 lbs. honey	Local & non-local areas	12	Interstate
			135		

VOLUSIA COUNTY FOOD PROCESSING PLANTS (Cont'd)

- January 1963 -

III-59

Name of Plant, Manager, and Location	# of employees	Capacity of Plant	Obtainment of Raw Products	Months of operation	Distribution of Product
City Provision Mr. & Mrs. P. Frank Daytona Beach	8	493,000 lbs. meat and assortments thereof	Local and other meat companies	12	Local
Bell Bakeries Mr. J. J. Miller Daytona Beach	106	15,673,380 lbs. bread & rolls	Open market	12	Central and E. Central Fla.
Krispy Kreme Donut Co., Inc. Mr. K. R. Storms Daytona Beach	14	300,000 doz. donuts	Shipped into company from out of state office - bought locally	12	Local
Zeppo's Pizza Shop Mr. E. Taft Daytona Beach	1	7 kinds of pizza	Local	12	Local
Manna Sausage Shop Mr. M. C. Zuber Allandale	2	3,700 lbs./week - sausage and head-cheese	Local	12	East Central Florida
Felix Special's Mr. & Mrs. F. Matzat Orange City	3	75,000 lbs. sausage 260 lbs. potato salad	Meat Packing Co. and Local	12	Central Fla.

SECTION VIII WILDLIFE

FLORIDA'S SIX COUNTY WILDLIFE MANAGEMENT AREAS

Wildlife Management Areas	Acres Open to Hunting	Acres Closed to Hunting	Owner-ship	Location by County
Farnton	60,000		Private	Volusia-Brevard
Holopaw	23,000		Private	Osceola
Tomoka	44,000	6,000	Private	Volusia
Totals	127,000	6,000		

The major landowners in each of the wildlife areas are as follows:

Farnton: Miami Corporation

Holopaw: Consolidated Naval Stores

Tomoka: Tomoka Land Company - Hudson Pulp and Paper Corp.

FARNTON AREA

"The Farnton Wildlife Management Area is located in Volusia and Brevard Counties, 13 miles south of Daytona Beach and west of U. S. Highway 1 between the towns of Oak Hill and Enterprise."

"The area was established in 1950 when an agreement was negotiated by the Game and Fresh Water Fish Commissions, Game Management Division with a local cattleman who had the land leased for livestock raising from the Miami Corporation."

"Deer and turkey are the important game species present. Wild hogs are also considered as game animals in this area."

TABLE ON GAME KILLED

Year	Buck Deer	Turkey		Quail	Squirrels		Dove	Duck
		Tom	Hen		Cat	Fox		
1951	23	25						
1953	41	21	22	233	108	13		9

TABLE ON GAME KILLED (Cont'd)

Year	Buck Deer	Turkey		Quail	Squirrels		Dove	Duck
		Tom	Hen		Cat	Fox		
1955	59	17	22	179	752	54	17	67
1957	101	28	34	415	1517	169	12	28

HOLOPAW AREA

"The Holopaw Wild Life Management Area is located in Osceola County approximately 10 miles south of St. Cloud and directly southwest of Holopaw. It consists of approximately 20,000 acres and was acquired by the Game Management Division under a 5-year lease with consolidated Naval Stores in 1955."

"The Holopaw area offers good deer and turkey range in the cypress swamps and hammocks and fair quail in the flatwoods."

TABLE ON GAME KILLED

Year	Deer	Turkey	Quail	Squirrel	Dove	Duck
1955	3	7	353	3	3	
1956	5	6	266	2	2	1
1957	1	20	186	13	1	

TOMOKA AREA

"The Tomoka Wild Life Management Area is located north of Highway 92 between DeLand and Daytona Beach in Volusia County. The 56,000 acre management area was established in 1950 with the execution of leases by the Game Management Division with two major landowners, the Hudson Pulp and Paper Company and the Tomoka Land Company."

"Deer and turkey are the principal game species hunted on the Tomoka area but quail, cat squirrels, and fox squirrels are taken in some numbers."

"The area is not open to fishing except during hunting season but there are only two bodies of water of sufficient size to offer much in the way of angling. Indian Pond is 63 acres in size and Scroggin Pond is 46

acres. Both are underfished and overpopulated."

"Except during the hunting season, most of the gates along the boundary fence are kept locked, excluding use by the general public, except on permission. The Indian Pond section is the one exception, for this portion of the area is open to fishing and other recreational uses at all times."

TABLE ON GAME KILLED

Year	Buck Deer	Turkey		Quail	Squirrels		Dove	Duck
		Tom	Hen		Cat	Fox		
1951	25	5						
1953	22	10	8	41	46	12		
1955	32	6	12	73	195	33	38	6
1957	62	15	22	94	202	30		2

BOTANICAL HABITAT OF MANAGEMENT AREAS

Farmton: Pine - palmetto flatwoods (59%).
Softwood swamp (+35%).
Prairie, scrub oak, hardwood-cabbage palmetto hammock.
(Balance).

Holopaw: Cypress swamps.
Cabbage-oak hammocks.
Pine - palmetto flatwoods.

Tomoka: Flatwoods: Slash pine, saw palmetto, gallberry, and
wiregrass associations (48%).
Scrub pine, open prairie, and water. (Balance).

Source: Florida's Wild Life Management Areas;
Florida Game and Fresh Water Commission, 1958.

III-60

An Analysis of Fishing Licenses by County 1960-61 Season

County	Resident State	Non-Resi- dent State	Non-Resi- dent 14-day	Non-Resi- dent 3-day	Total All Series
Brevard	9,147	38	512	1,842	\$19,765.25
Orange	27,199	405	2,170	4,140	62,298.25
Osceola	3,312	256	646	847	11,141.00
Seminole	9,499	112	772	2,343	22,402.25
Volusia	9,088	204	1,428	5,784	28,162.00
Indian River	2,343	18	198	406	5,280.25
<u>Totals:</u>	60,588	1,033	5,726	15,362	\$149,049.00

1959-60

Brevard	6,695	35	379	1,246	\$14,449.25
Orange	24,711	359	2,098	3,247	56,375.25
Osceola	3,322	260	652	809	11,178.50
Seminole	7,606	114	693	1,937	18,466.50
Volusia	8,271	199	1,392	5,756	26,396.25
Indian River	1,821	25	148	379	4,289.75
<u>Totals:</u>	52,426	992	5,362	13,374	\$131,155.50

1958-59

Brevard	7,175	37	396	1,416	\$15,530.25
Orange	23,962	355	2,023	3,557	55,109.50
Osceola	2,966	240	743	788	10,607.50
Seminole	6,728	98	631	1,813	16,460.00
Volusia	7,998	178	1,648	6,136	26,856.50
Indian River	1,619	16	122	304	3,663.25
<u>Totals:</u>	50,448	924	5,563	14,014	\$128,227.00

1957-58

Brevard	5,231	38	417	987	\$11,772.25
Orange	21,745	383	2,008	3,291	51,198.75
Osceola	2,708	214	622	668	9,413.00
Seminole	6,059	81	605	1,606	14,834.25
Volusia	8,411	250	1,674	7,619	29,860.25
Indian River	1,395	7	83	267	3,027.25
<u>Totals:</u>	45,549	973	5,409	14,438	\$120,105.75

An Analysis of Fishing Licenses by County (Cont'd)

	<u>1956-57</u>					
Brevard	4,384	36	481	1,023		\$10,498.00
Orange	2,085	382	2,253	4,149		51,626.75
Osceola	2,174	199	688	680		8,538.50
Seminole	5,286	94	690	1,643		13,903.50
Volusia	7,963	203	1,903	9,159		30,833.25
Indian River	1,243	12	126	176		2,849.25
<u>Totals:</u>	23,135	926	6,141	16,830		\$118,249.25

III-61

An Analysis of Hunting Licenses by County

1960-61

County	Resident County	Resident Other Than Home County	Resident State	Total All Series
Brevard	2,062	10	1,660	\$15,687.50
Orange	1,341	23	4,799	36,274.75
Osceola	772	8	310	3,619.00
Seminole	695	2	955	8,060.25
Volusia	2,456	10	2,298	20,626.00
Indian River	544	2	457	4,255.00
<u>Totals:</u>	7,870	55	10,479	\$88,541.50

1959-60

Brevard	2,142	5	1,767	\$16,900.50
Orange	1,325	13	4,820	36,503.75
Osceola	783	8	341	3,855.25
Seminole	724	3	1,001	8,378.00
Volusia	2,679	9	2,123	20,088.25
Indian River	524	3	449	4,149.00
<u>Totals:</u>	8,177	41	10,501	\$89,874.75

1958-59

Brevard	2,556		1,661	\$17,103.00
Orange	1,380	30	4,546	34,655.00
Osceola	758	13	323	3,742.50
Seminole	778	8	1,039	8,960.50
Volusia	2,426	7	2,066	19,080.50
Indian River	544	1	425	4,001.00
<u>Totals:</u>	8,442	59	10,060	\$87,542.50

1957-58

Brevard	2,197	10	1,309	\$13,991.75
Orange	1,311	23	4,014	31,124.25

III-61

An Analysis of Hunting Licenses by County (Cont'd)

1957-58 (Cont'd)

Osceola	762	4	238	3,111.50
Seminole	735	8	907	7,865.25
Volusia	2,426	11	1,945	18,326.50
Indian River	496	4	381	3,694.00
<u>Totals:</u>	7,927	60	8,794	\$78,113.25

1956-57

Brevard	1,843	3	963	\$10,755.25
Orange	1,165	32	3,179	24,783.75
Osceola	684	13	197	2,650.00
Seminole	660	3	822	7,141.00
Volusia	2,313	7	1,751	16,827.75
Indian River	465	2	353	3,391.75
<u>Totals:</u>	7,130	60	7,265	\$65,549.50

Tomoka Management Area-Volusia County-100,000 Acres

Farnton Management Area-Volusia and Brevard Counties-50,000 Acres

SECTION IX CONCLUSION

CONCLUSION

The area surrounding Cape Canaveral has experienced vast population and industrial expansion in the past decade. Present developments in the Cape Canaveral area indicate rapid and continuous expansion of community and industrial life which will directly affect people and the general environment.

It is essential that for the over-all good of the nation, all planning agencies co-ordinate their efforts so that residential areas, industry, recreational and wildlife areas and agriculture (livestock, citrus, and vegetable crops) are planned and developed so that all may function safely and efficiently in relation to each other and to their environment.

The findings indicate a definite need for a statistically sound Ecology Sampling Survey to determine the normal physical, chemical, and radiological components of the soils, plant life, livestock products and wildlife within the areas bound by ten, twenty, thirty, forty, and fifty mile radii extending from the Cape Canaveral launch area. After the normal range of the components has been determined, surveillance should be maintained by periodic sampling to determine variances from the established normal physical, chemical, and/or radiological components of the environment.

SECTION X BIBLIOGRAPHY

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I. AGRICULTURE

- I.A. County Agricultural Agents
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- VI.B. Pamphlet

VII. OTHER SOURCES OF INFORMATION

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I. AGRICULTURE

I.A. County Agricultural Agents

- I.A.1. Mr. R. Bruce Christmas
Assistant County Agricultural Agent
Orange County
Orlando, Florida
- I.A.2. Mr. H. W. Cunningham
Assistant County Agricultural Agent
Brevard County
Cocoa, Florida
- I.A.3. Mr. Forrest V. McCullars
County Agricultural Agent
Indian River County
Vero Beach, Florida
- I.A.4. Mr. James T. Oxford
County Agricultural Agent
Brevard County
Cocoa, Florida
- I.A.5. Mr. James Smith
County Agricultural Agent
Osceola County
Kissimmee, Florida
- I.A.6. Mr. Henry Swanson
County Agricultural Agent
Orange County
Orlando, Florida
- I.A.7. Mr. W. W. Townsend
County Agricultural Agent
Volusia County
DeLand, Florida

I.A.8. Mr. Cecil A. Tucker, II
County Agricultural Agent
Seminole County
Sanford, Florida

I.B. Agricultural Stabilization and Conservation Representatives

I.B.1. Mr. James A. Howard, Manager
Brevard County - ASCS
Cocoa, Florida

I.B.2. Mrs. Lenora Sloan, Acting Manager
Orange County - ASCS
Orlando, Florida

I.B.3. Mr. Story, Manager
Osceola County - ASCS
Kissimmee, Florida

I.B.4. Mr. Lyman E. Twitchel, Manager
Indian River County - ASCS
Vero Beach, Florida

I.C. Soil Conservationists

I.C.1. Mr. Hanick, State Director of Soil Conservation
USCA Building
412 N. E. 16th Avenue
Gainesville, Florida

I.C.2. Mr. Lewis, Soil Conservationist
USCA Building
412 N. E. 16th Avenue
Gainesville, Florida

I.C.3. Mr. W. H. Palmroy
Soil Conservation Service
District Office
Cocoa, Florida

I.D. State and Federal Agricultural Representatives and Agencies

- I.D.1. Agricultural Extension Service
U. S. Department of Agriculture
University of Florida
Gainesville, Florida
- I.D.2. Dr. Fieson, Chief of Plant Division
Department of Agriculture
University of Florida
Gainesville, Florida
- I.D.3. Mr. D. Conner, Commissioner
State of Florida Department of Agriculture
Nathan Mayo Building
Tallahassee, Florida
- I.D.4. Mr. E. F. Scarborough, Marketing Specialist
State Marketing Bureau
Florida Department of Agriculture
403 W. Monroe Street
Jacksonville, Florida
- I.D.5. Mr. L. Woodham, Director
Division of Inspection
Department of Agriculture
Nathan Mayo Building
Tallahassee, Florida

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II. EDUCATION

II.A. County Superintendents of Education

- II.A.1. Mr. W. J. Darden, Superintendent
Brevard County
P. O. Box 5
Titusville, Florida

II.A.2. Mr. R. E. Kipp, Superintendent
Orange County
P. O. Box 271
Orlando, Florida

II.A.3. Mr. R. T. Milwee, Superintendent
Seminole County
School Administration Building
202 Commercial Avenue
Sanford, Florida

II.A.4. Mr. J. H. Smiley, Superintendent
Volusia County
P. O. Box 780
DeLand, Florida

II.A.5. Mr. W. B. Stephens, Superintendent
Osceola County
Thacker and Ernst Streets
P. O. Box 652
Kissimmee, Florida

II.A.6. Mr. J. A. Thompson, Superintendent
Indian River County
P. O. Box 2168
Vero Beach, Florida

II.B. Registrars of Educational Institutions

II.B.1. Registrar
Bethune-Cockman College
Daytona Beach, Florida

II.B.2. Registrar
Brevard Engineering College
Melbourne, Florida

II.B.3. Registrar
Brevard Junior College
Cocoa, Florida

- II.B.4. Registrar
Carver Junior College
Cocoa, Florida
- II.B.5. Registrar
Daytona Beach Junior College
Daytona Beach, Florida
- II.B.6. Registrar
Orlando Junior College
Orlando, Florida
- II.B.7. Registrar
Rollins College
Winter Park, Florida
- II.B.8. Registrar
Stetson University
DeLand, Florida

II.C. Other Educational Information Sources

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Box 1313
Orlando, Florida
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State Superintendent of Public Instruction
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Jacksonville, Florida

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IV.A. Chambers of Commerce

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Cocoa, Florida

IV.A.2. Daytona Beach Chamber of Commerce
Daytona Beach, Florida

- IV.A.3. DeLand Chamber of Commerce
DeLand, Florida
- IV.A.4. Eau Gallie Chamber of Commerce
Eau Gallie, Florida
- IV.A.5. Kissimmee Chamber of Commerce
Kissimmee, Florida
- IV.A.6. Melbourne Chamber of Commerce
Mr. R. W. Bruce, Manager
P. O. Box 668
Melbourne, Florida
- IV.A.7. New Smyrna Beach Chamber of Commerce
112 Canal Street
New Smyrna Beach, Florida
- IV.A.8. Ormond Beach Chamber of Commerce
Ormond Beach, Florida
- IV.A.9. St. Cloud Chamber of Commerce
Mr. G. Dawson, Manager
St. Cloud, Florida
- IV.A.10. Sanford Chamber of Commerce
Sanford, Florida
- IV.A.11. Titusville Chamber of Commerce
Titusville, Florida
- IV.A.12. Vero Beach Chamber of Commerce
Mr. J. W. Tippin, Manager
Vero Beach, Florida

IV.B. Industry

- IV.B.1. Mr. R. H. Mills, Industrial Manager
Daytona Beach Area Committee of "100"
City Island, P. O. Box 1309
Daytona Beach, Florida

IV.B.2. U. S. Employment Service
Unemployment Compensation Service
Tallahassee, Florida

IV.B.3. Florida Industrial Commission
Tallahassee, Florida

IV.C. Urban Development Data

IV.C.1. Canaveral Groves Estates
P. O. Box 508
Cocoa, Florida

IV.C.2. Florida Development Commission
Dr. J. O. Boynton, Research Director
Tallahassee, Florida

IV.C.3. General Development Corporation
Port Malabar Division
Mr. R. E. Huff, General Manager
1120 S. E. Port Malabar Boulevard
Palm Bay, Florida

IV.C.4. Mr. J. McMorry
Geography Department
Florida State University
Tallahassee, Florida

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V. PUBLIC HEALTH

V.A. County Board of Health

V.A.1. Dr. C. F. Bradley, M.D., Assistant Director
Volusia County Health Department
Daytona Beach, Florida

V.A.2. Dr. C. C. Flood, M.D., M.P.H., Director
Indian River County Health Department
Vero Beach, Florida

V.A.3. Dr. C. C. Flood, M.D., M.P.H., Director
Osceola County Health Department
Kissimmee, Florida

V.A.4. Dr. D. V. Galloway, M.D., Director
Volusia County Health Department
Daytona Beach, Florida

V.A.5. Dr. T. P. Haney, M.D., Director
Brevard County Health Department
Cocoa, Florida

V.A.6. Dr. F. Leone, M.D., Director
Seminole County Health Department
P. O. Box 1856
Sanford, Florida

V.A.7. Dr. L. A. Scribner, D.V.M. ✓
Public Health Veterinarian
Orange County Health Department
Orlando, Florida

V.A.8. Dr. W. N. Sisk, M.D., Director ✓
Orange County Health Department
Orlando, Florida

V.A.9. Mr. W. B. Whittaker, Sanitation Director
Orange County Health Department
Orlando, Florida

V.A.10. Mr. W. Hancock, Chief Sanitarian
Brevard County Health Department
Melbourne, Florida

V.A.11. Mr. T. W. Miller, Chief Sanitarian
Osceola County Health Department
Kissimmee, Florida

V.A.12. Mr. W. V. Richards, Chief Sanitarian
Volusia County Health Department
Daytona Beach, Florida

V.A.13. Mr. C. W. Scheffield
Sanitary and Industrial Hygiene Engineer
Orange County Health Department
Orlando, Florida

V.B. Florida Nuclear Commission

V.B.1. Mr. R. H. Dunlap, Director
Florida Nuclear Commission
P. O. Box 1495
Tallahassee, Florida

V.C. Florida State Board of Health

V.C.1. Dr. W. T. Sowder, M.D., M.P.H.
State Health Officer
Florida State Board of Health
Jacksonville, Florida

V.C.2. Dr. E. G. Williams, M.D., Director
Radiological and Occupational Health
Florida State Board of Health
Jacksonville, Florida

V.C.3. Dr. W. L. Jennings, Biologist
Florida State Board of Health
Jacksonville, Florida

V.C.4. Mr. C. E. Roessler
Radiological Health Physicist
Florida State Board of Health
Jacksonville, Florida

V.D. Publication

V.D.1. '63 Fiscal Year Plan for Construction of Hospitals
and Related Medical Facilities in Florida. By:
Florida Development Commission, Hospital Construction
Division. Tallahassee, Florida. 1962.

VI. WILDLIFE

VI.A. Florida Game and Fresh Water Fish Commission

VI.A.1. Mr. R. Albritton, Wildlife Officer
P. O. Box 1116
St. Cloud, Florida

VI.A.2. Mr. A. D. Aldrich, Director
Florida Game and Fresh Water Fish Commission
Central Florida Region
2520 East Silver Springs Boulevard
Ocala, Florida

- VI.A.3. Mr. J. Banks, Wildlife Officer
Florida Game and Fresh Water Fish Commission
Tallahassee, Florida
- VI.A.4. Mr. J. W. Bickerstaff, Regional Manager
Florida Game and Fresh Water Fish Commission
2520 East Silver Springs Boulevard
Ocala, Florida
- VI.A.5. Mr. Charles Clark, Wildlife Officer
Oak Hill, Florida
- VI.A.6. Mr. O. E. Frye, Assistant Director
Florida Game and Fresh Water Fish Commission
Central Florida Region
2520 East Silver Springs Boulevard
Ocala, Florida
- VI.A.7. Mr. Johnson, Wildlife Officer
P. O. Box 391
Lake Mary, Florida
- VI.A.8. Mr. R. F. Klant
Fish and Game Biologist
State of Florida Game and Fresh Water Fish Commission
P. O. Box 1835
Vero Beach, Florida
- VI.A.9. Mr. Glen Overstreet, Wildlife Officer
P. O. Box 485
Mims, Florida
- VI.A.10. Mr. Dale Phelps, Wildlife Officer
3021 Kilgore Avenue
Orlando, Florida
- VI.A.11. Mr. E. G. Pierce, Wildlife Officer
P. O. Box 2652
DeLand, Florida

VI.A.12. Mr. L. A. Tindall, Wildlife Officer
P. O. Box 562
Melbourne, Florida

VI.R. Pamphlet

VI.B.1. Florida's Wildlife Management Areas. Florida Game and
Fresh Water Fish Commission, Tallahassee; 1958.

VII. OTHER SOURCES OF INFORMATION

VII.A Farm Managers - Land Owners - Ranchers

VII.A.1. Mr. Carlisle Platt, Rancher
Palm Bay, Florida

VII.A.2. Mr. Frank Darden, Rancher
Titusville, Florida

VII.A.3. Mr. Millsap, Office Manager
A. Duda and Sons Ranch
Rockledge, Florida

A.4. Mr. Sistrunk, Resident Manager
Norris Cattle Company
Seminole Division
Star Route
Titusville, Florida

VII.A.5. Mr. W. W. Smedberg, Resident Manager
Miami Corporation
Star Route
O'Steen, Florida

VII.A.6. Mr. A. Sotille, Rancher, Citrus Grower
Mico, Florida

VII.A.7. Mr. Toomy, Office Manager
Deseret Farms of Florida, Inc.
Star Route
Melbourne, Florida